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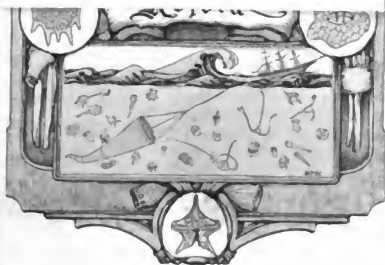
Charles Rollin





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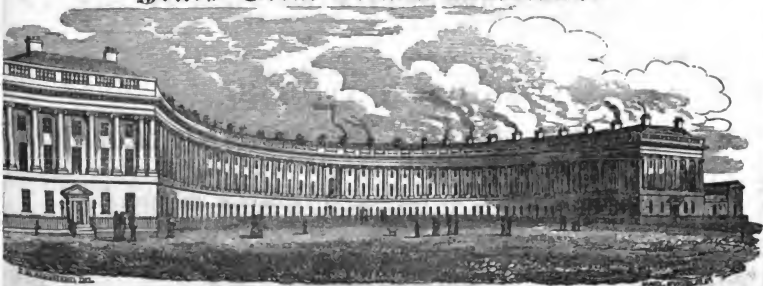
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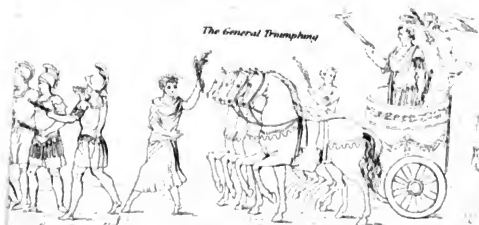


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THE HISTORY
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ARTS AND SCIENCES
OF
THE ANCIENTS

Charles
BY M. ROLLIN
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PRINCIPAL OF THE UNIVERSITY OF PARIS, PROFESSOR OF ELOQUENCE IN THE
ROYAL COLLEGE, AND MEMBER OF THE ROYAL ACADEMY OF
INSCRIPTIONS AND BELLES LETTRES.

WITH
NOTES AND SUPPLEMENTS
BY JAMES BELL

AUTHOR OF 'CRITICAL RESEARCHES IN GEOGRAPHY.'

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THE PUBLISHERS' PREFACE.

IT is a fact known to few English readers of Rollin, that the original edition of his *Ancient History*, and all the subsequent French editions, down to that edited by M. Letronne, in 1823, contain, as an integral part of that work, ‘*A History of the Arts and Sciences of the Ancients*, which was also retained in the first edition of the English translation. What induced the English publishers to mutilate the work, by subsequently suppressing so large and valuable a part of it, we shall not determine: certain, however, it is, that their injudicious example has been followed in all the English editions published since 1740; so that even few booksellers are now aware of the fact, that in all the English editions of Rollin published during the last eighty-five years, nearly a third part of the work has been suppressed; and that a part, too, which the Author himself—in common, we believe, with every enlightened and philosophic mind—regarded as the most valuable and interesting of the whole. For, as Dr. Johnson well remarks, “There is no part of History so generally useful, as that which relates the progress of the human mind—the gradual improvement of reason—the successive advances of science—the vicissitudes of learning and ignorance, which are the light and darkness of thinking beings—the extinction and resuscitation of arts, and the revolutions of the intellectual world. If accounts of battles and invasions are peculiarly the business of princes, surely the useful or elegant arts are not to be neglected.” And as one of the principal objects and advantages of History is to gain an insight into the progress of man in political and individual happiness, surely an acquaintance with the advances which he has made in every species of knowledge which secures his liberty, or multiplies his means of defence or enjoyment, must be highly interesting and important. The history of Laws, Arts, and Sciences, is, properly speaking, the

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history of the human mind; and, while the most splendid trophies of absolute power and unlimited empire seem destined, as by a moral necessity, to pass away, the dominion of the Arts and Sciences shall be wide as the world, and lasting as time.

In restoring, therefore, this important portion of a popular work to the English public, the Publishers feel assured that they are performing a real service to the cause of literature. 'The History of the Arts and Sciences of the Ancients' constitutes part of the ninth, and the whole of the tenth, eleventh, and twelfth volumes of the latest Paris editions of Rollin's 'Ancient History,' and in the first and only complete English edition (that of 1740) makes four volumes. By adopting a comprehensive, and, at the same time, beautiful plan of typography, the Publishers of the present edition have been enabled, notwithstanding a great mass of additional matter, to comprise the whole in **ONE VOLUME**, uniform with their edition of the 'Ancient History,' but published separately, for the purpose of furnishing those who may possess other editions of Rollin with an economical and ready opportunity of completing their copies.

Independently of the present being the only procurable edition of Rollin's 'Arts and Sciences,' the copious Supplements and Notes of the Editor give it a further claim, it is hoped, on the public attention. Much important light has been thrown on every department of ancient science and art, since the time of Rollin, of which it has been the Editor's endeavour to avail himself: and it is confidently trusted, that, on the whole, the work will be found to contain a fund of curious and interesting information rarely to be met with in a single volume, on subjects, too, seldom illustrated save in books that are little accessible to the general reader.

Glasgow, May, 1825.

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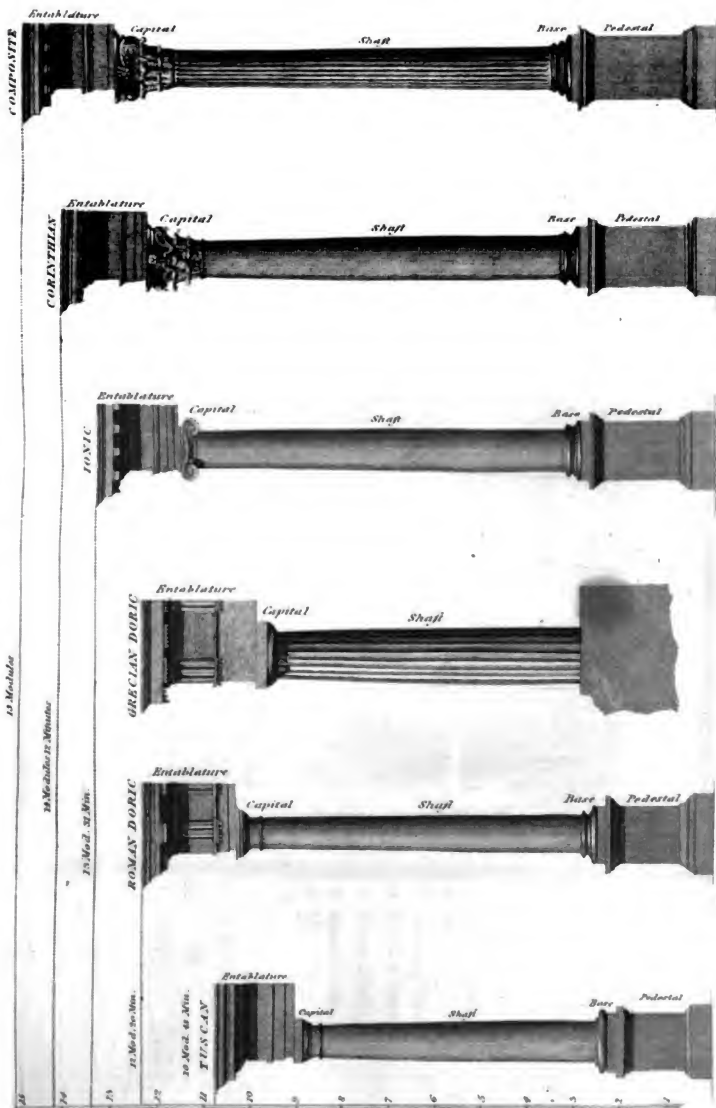
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*The dotted lines
cross the Cavalry &c.*

*denote the divisions
of Troops or Maniples.*

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C. Porta Principales

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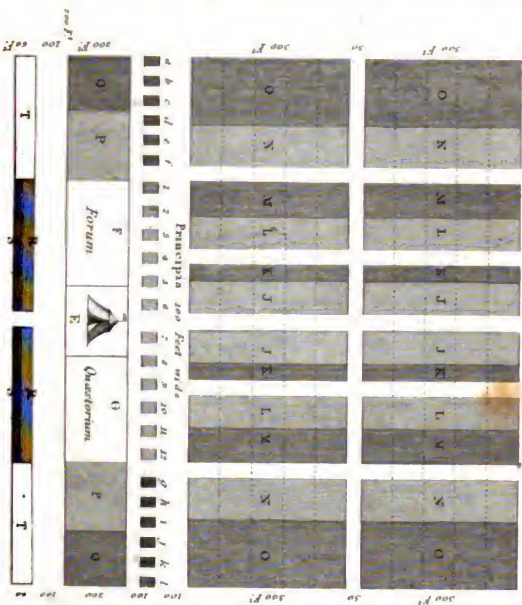
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PRELIMINARY DISSERTATION
ON THE
ORIGINAL STATE OF MAN,
WITH THE
ORIGIN OF ARTS AND SCIENCES.

THIS is a subject of more importance than many are aware of, as it involves a question of the highest interest to the inquiring mind, namely, Whether the Arts and Sciences originated in a state of civilization or savagism? or in other words, Whether the first ancestors of the human race were not only endowed with those intellectual and sensitive powers common to all the race, but also instructed in the use, and aided in the exercise of them, by the beneficence of Omnipotence, it being obvious they had neither experience to guide them, nor tuition to instruct them, as their descendants have; or were at first in a state of the lowest savagism, from which they gradually emerged by a natural and necessary progress, originating in the innate and unaided powers of the human mind? The former is the doctrine of revelation, and is found to be in perfect consonance with all that is known by observation and experience of the nature of man, and with all the well authenticated history of the human race. The other, though sometimes dignified with the proud epithet of *philosophy*, seems equally opposed to revelation, history, and facts.

Most of the fashionable names in modern philosophy have declared for the latter opinion, which, however modified, is but an old dogma hatched in the dark abyss of the Phenician cosmogony, first reduced into form by Democritus and Epicurus, and sung, in harmonic numbers, by Lucretius, that bard of atheistic philosophy, and by Horace, another of the same school, who have described the first men as a *mutum ac turpe pecus*, a dumb and vile herd, crawling on the ground on all fours.

Cum propeperunt primis animalia terris,
Mutum ac turpe pecus, glandem atque cubilia propter,
Ungulibus, et pugnis, dein' fustibus, atque ita porro
Pugnabant armis, quæ post fabricaverat usus;
Donec verba, quibus voces sensusque notarent,
Nominaque, invenero. Dehinc absistere bello,
Oppida cæperunt munire, et ponere leges,
Ne quis fur esset, neu latro, neu quis adulter.

Horat. Sat. III. Lib. I. p. 99, 106.

"When rude animals, they crawled forth upon the first formed earth; the mute and vile herd fought with their nails and fists for their acorns and caves, afterwards with clubs, and, finally, with arms, which experience had fabricated, till they found out words by which to distinguish their language and sensations: thenceforward they began to abstain from war, to fortify towns, and establish laws, that no person might, with impunity, be a thief, a robber, or an adulterer."

This poetical passage is the text from which modern philosophers have preached, and on which they have erected their Babylonish edifice of the natural and necessary progress of the human race, from the dumb and crawling brute, to the eloquent, erect, and polished man. Not only has this monstrous dogma been asserted and defended, in opposition to scripture, by infidel philosophers, but also by some who profess their belief in Christianity, and of whom better things might have been expected. The most favourable apology that can be made for such persons is, that they had not studied the subject as they ought, and therefore were not aware of the inconsistency of their opinion on this point with the other parts of their professed creed, nor of its consequences. There is a third class of persons who believe that all mankind were re-

duced to a state of savagism by the catastrophe at the building of the tower of Babel, when all languages were confounded. Though this class do not set out with the absurd theory, that man was originally the *mutum ac turpe pecus* of pagan poetry, yet still, so far as our present subject is concerned, their opinion leads to the same result, inasmuch as Arts and Sciences originated not less upon their system than on that of the infidel philosophy, in a state of savagism.

In examining the subject we shall first state the scripture account of the original state of man, endeavour to illustrate it, and carry down his history from the creation to the confusion of tongues, so far as the Mosaic narrative is connected with the subject; then endeavour to show that the confusion of tongues did not produce universal savagism. Afterward, we shall state the infidel account of the matter, with the reasons adduced to prove its truth, contrast it with the Mosaic account, and show that if the human race had been originally such as the pagan cosmogonists, poets, and modern philosophers, have represented them, nothing but continued, perpetual savagism would have been the result; and that instead of debating, respecting the origin of Arts and Sciences, as we now do, we should have been in a state of utter and hopeless incapability of forming a single conception about the matter.

The Mosaic narrative represents the creation of man as the end of the material creation—as the last and greatest of God's creative acts. It is there represented as a matter of such importance, that, to speak after the manner of man, a Divine consultation was held about it. "And Elohim (the Omnipotent) said, Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth." This is very remarkable phraseology, nowhere used in the sacred narrative when relating God's previous successive acts of creative power. Each of these previous acts is simply announced by the prefatory phrase, "and the Omnipotent said," and then follows the immediate effect. But here, in the very announcement itself, "and the Omnipotent said, let us make man in our image, after our likeness," the reader is naturally and necessarily led to expect an act of creative power transcending all that went before, in the dignity and glory of the being that was to be brought into existence. His anticipations are not deceived, his expectations, so strongly excited by the solemnity of the prefatory speech, are fulfilled; for, in the verse immediately subsequent, it is said, "the Omnipotent created man in his own image, in the image of God created he him, male and female, created he them." The doubling of the

phrase, *the image of God*, intimates the strong resemblance that man bore to his Maker. Such a phrase is nowhere used respecting the animal tribes, whether belonging to air, or earth, or sea; clearly implying, that there was something quite distinct from mere animality, and vastly greater than it, belonging to man. Such phraseology does not intimate that he bore any resemblance to his Maker in his external form or material structure; for as God is a pure Spirit, an immaterial Being, nothing material, however formed, can bear the least similitude to Deity. This is what we are certain of, as from the nature of God, so also from his own express prohibition of all image worship whatever, on set purpose to prevent men from imagining that any form or shape, whether animal or human, could be a resemblance of Him to whom there is nothing like, whether in the air, the earth, or the deep profound. Therefore, the phrase, *the image of God*, must mean, if it mean any thing, a resemblance to his Maker in the intellectual faculties of his mental nature, and in his moral qualities; or a resemblance which consisted not merely in having an immaterial nature, (for if such resemblance had been essential to the immaterial principle, man could not with any propriety be said to have lost the divine image, as he could not have been man without it, and could not have lost it but by his annihilation,) but in knowledge, righteousness, and true holiness.

If, as scripture expresses it, there is a spirit in man, and the inspiration of the Almighty giveth understanding, then the existence of an immaterial principle, with its necessary properties, as contradistinguished to his material frame, is essential to man—he could not be man without it. If the phrases, *the image of God*, *the likeness of God*, had merely meant that man was created with an immaterial thinking principle, that invisible and immortal thing denominated the soul; or nothing more than that Adam was created with those combined principles essential to man, which are involved in the very conception of the term, then Adam would have lost nothing by the fall but the immortality of his material principle, along with his expulsion from the garden, and wonted communion with his Maker. At this rate, the wickedest man that ever breathed, as a Cain or a Caligula, bore, whilst they lived, the Divine image as much as the first man. The phraseology therefore means something vastly different, something distinct from that which is common to all the race, something that was not essential to Adam, considered merely as a man, even a superior Divine principle, which qualified him for holding converse and communion with his Maker. That such was the case, is evident from the fact recorded respecting the birth of Seth, that

Adam begat a son in his own likeness. What likeness? Not that surely which children bear to their parents, merely, for we had no need that revelation should inform us of that; for, according to the established laws of procreation, Adam could not but beget a son in his own likeness, both in his mental powers and bodily form, a likeness essential to man. The phrase evidently implies a likeness to him in his altered moral circumstances. Adam originally bore the image of his Maker in innocence; Seth, that of Adam in a fallen state. What the image of God means, when applied to the creation of Adam, we have clearly expressed in Eph. iv. 22—24. "to put off the old man, which is corrupt according to the deceitful lusts; and to put on the new man, which, after God, is created in righteousness and true holiness:" also in Col. iii. 9, 10. where the new man is represented as created in knowledge, after the image of Him that created him. This is just the image in which Adam was originally created, or, as it is somewhat differently expressed in Eccl. vii. 29. "God created man upright." He lost by the fall the image which Christ came to restore, and which is superinduced in regeneration by the Holy Spirit. To suppose that Adam could actually become holy without being created so, or without such a previous disposition concentered with him, is to suppose an impossibility—is to suppose the same absurdity in the moral world as in physics, that a body at rest should change its state, and commence motion from the previous principle of the *vis inertia*. Holiness must either be concentered with man, or he must receive it by what scripture calls a new birth. If holiness and intellectual knowledge had been to be acquired by the first man solely by his own powers, unaided and uninstructed, he would have been in the same deplorable state, as the veriest savage upon earth; and could in no respect have been an object of comparison or contrast to the Lord Jesus Christ, either in respect of federal headship, or of those spiritual blessings which were lost by the fall and restored by the second Adam.

We are further told, that God blessed the primeval pair, appointed their food, ordained a Sabbath to be observed by them, as commemorative of creation-work, rest from it, and satisfaction in it: also, that the Lord God planted a garden, eastward, in Eden, into which he put the man whom he had formed, to dress and keep it. Where this Eden was, it is impossible to determine with certainty; the very fact of such a multitude of discordant opinions respecting its site, is a strong proof of the obscurity of the subject. All we know is, that Eden was a delightful district of the primeval earth, watered throughout its extent by *four converging streams*; that in a selected place of this delightful district, God had, from the first, prepared a

garden, or paradise, bountifully contrived for the dwelling-place of the primitive pair, and as the cradle of the human race; from whence, had our first parents continued in innocence, they might have extended themselves throughout that same delightful region. We are told, that in this garden the Lord God made every tree to grow that is pleasant to the sight, and good for food. The Hebrew word rendered garden, is translated *עֵדֶן* by the Septuagint, from the original Persian word *PARDES*, and which is now used exclusively to designate the primitive abode of the happy and innocent primeval pair, and by our blessed Lord himself, to convey to his auditors a *clear and familiar sense* of the blissful state into which have entered the church and assembly of the first-born, and the spirits of just men made perfect. Now, surely such a delightful abode as that of Eden's garden was not prepared for savages, as such a place was not fit for them, nor they suited to it; for savages do not dress gardens nor keep them. The very fact that the Lord God put man there, implies a state of high civilization; as the very conception of an enclosed spot for the purpose of horticulture, is never formed by a savage, nor can be so, and much less that of keeping it in order. Scripture farther informs us, that this extensive garden, with all its varied produce, was consigned over to Adam, on the easy tenure of abstaining from eating the fruit of only one tree, denominated "the tree of the knowledge of good and evil." We are then told that God brought to Adam every animal which had been created; and we find him to have been so well acquainted with their several natures, as to have given them appropriate names; and when an helpmate was provided for himself, he immediately acknowledged her as bone of his bone, and flesh of his flesh; and called her *isha*, or woman, because she was taken out of man.

The successive order of the Divine acts respecting the creation of the primitive pair, seems to have been the following: first, the creation of Adam; then the bringing of all the animals before him to receive their names from him; then the creation of Eve, as his helpmate; then the blessing of fecundity and maintenance, with dominion over the inferior creation, animate and inanimate; then the placing them in the garden, and prescribing the law on which they should hold it, fenced with the penalty of the loss of immortality, in case of disobedience, with the implied promise of confirmation in their happy state, and a more glorious immortality than that which they then possessed, as soon as they had finished their term of probation.

All this marks the high pinnacle of glory on which stood, though short, the primeval pair. The first earth was suited to the moral nature of man, as he came forth from the creative hand of

Infinite Benevolence. God, who is a Being infinitely active, implanted a congenial principle in man. Such a principle was as much concreated with his mental frame and corporeal form, as were those holy dispositions and intellectual endowments which fitted him to be lord of the inferior creation; and in which consisted the image of his Maker. Happiness neither does, nor can consist in indolence, but in action: a state of mere *inertia* cannot produce it. Constituted as was the first man, he could not be inactive. Created in all the plenitude of his sensitive and rational powers, and enjoying the instruction and converse of his glorious Maker, the phenomena of nature, in all their beauty, grandeur, harmony, and utility, could not but arrest the attention, and engage the active contemplation of his mind. So endowed, he would see at once, in these phenomena, the reflected glories of his Creator. Ravished with their beauties, struck with their grandeur, and filled with admiration of their mutual harmonies and nice adjustments, he would rise at once to the contemplation of the glorious Architect of Nature's sublime temple, and exclaim, in holy astonishment, "How manifold are thy works, Lord God of Hosts! in wisdom hast thou made them all." He would have far more clear and accurate perceptions of the sublime and beautiful in nature than any of his descendants. In these he would see at once, what his fallen posterity have been unable to discover, till enlightened by revelation, and irradiated by spiritual discernment, *viz.* infinite wisdom, power, and goodness; and, consequently, render that homage, that love, that gratitude, that glory, which were so justly due to that adorable Being who had fitted him with such exalted capacities, as enabled him to hold silent and ineffable converse with Nature, and with Nature's God. His capacities also, so engaged and so employed, could not fail of being invigorated and highly improved. The social converse which Adam and his happy consort, were fitted to hold and enjoy, could not but be attended with mutual improvement. Though employed to dress and keep the garden, the work was not labour; nor was the employment toil. It was only such as was suited to his nature, and commensurate to his physical powers.

Scripture, however, informs us farther, that this happy state was not of long duration; but how short we are not told. Seduced by the grand adversary of God and man, man proved ungrateful, and violated the easy tenure on which he held, not only for himself, but for his posterity, the delightful spot. The only visible symbol of gratitude and homage due to the Lord of Eden, was the untouched tree of the knowledge of good and evil. The easier the law, the greater the ingratitude, the more ag-

gravated the violation. "No sooner had he eaten of the interdicted fruit, than its mortal taste brought death into the world, and all our woe." The aspect of nature was changed; because the earth was no more the abode of innocence, but of sin.

"Earth felt the wound; and Nature from her seat,
Sighing through all her works, gave signs of woe,
That all was lost."

In consequence of their sin our first parents were now driven out of paradise into a desert world, a world that was cursed for their sakes; for, said Jehovah Elohim to the man, "Cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life: thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field. In the sweat of thy brow shalt thou eat bread, till thou return to the ground; for dust thou art, and to dust shalt thou return." Instead of the spontaneous produce of Eden, man was now doomed to eat his bread in the sweat of his brow, and to behold the thistle and the thorn, instead of the diversified trees of the garden, that bloomed with varied foliage and vernal beauty.

But though God took vengeance on the guilty pair, in thus expelling them from that garden, to which they had now forfeited every right by their ingratitude, he did not utterly forsake the work of his own hands, nor drive them out in a state of utter despair. After sentence was pronounced on them respectively, and when no hope of mercy could exist in their minds, its unexpected, its cheering sound struck their astonished ears, in the sentence pronounced on the author of all their woe. The tribunal of justice was then and at once converted into a mercy-seat. Mercy, which till then had lain concealed amongst the *arcana* of the Deity, was now developed, and benignant beamed on fallen man, and particularly on the woman, who had been first in the transgression "I will put enmity," said the Lord God to the serpent, "between thee and the woman, and between thy seed and her seed: he shall bruise thy head, and thou shalt bruise his heel."

The fact also stated in the narrative, that cherubims and a sword of flame were placed at the east of the garden, intimates, that our first parents were placed under a mixed dispensation; and hence, that they could now sing both of mercy and of judgment—the former being symbolised by the cherubims, and the latter by the flaming sword. It is commonly believed that the cherubims were angels, and that they waved in their hands the sword of flame. They are so described in the Miltonic account of the matter, as before quoted. But this is a mistaken notion; for the sword of flame was not wielded by the cherubims. No. The original phrase is, that it

turned itself, was endowed with a self-moving power. It seems to have been a circle of flame commensurate in extent to all the eastern side of the garden, or a body of flame in constant circular motion to prevent their return. The cherubims were placed for a different purpose—as symbols of God's gracious presence; and at which Adam and his wife might worship. Cherubims, when mentioned in scripture, are always so, in connexion with the economy of grace and dispensation of mercy, as those of Moses, Solomon, and Ezekiel, demonstrate. The propitiatory, or mercy-seat, was placed between the cherubims in the tabernacle; for, said Jehovah to Moses, "there will I meet with thee, and commune with thee from off the mercy-seat," Exod. xxv. 22. Hence Jehovah is invoked as *He that dwelleth between the cherubims*. O "thou that dwellest between the cherubims, shine forth," Psal. lxxx. 1. Hence we also read of the *wings* of the God of Israel as emblems of protection from danger. "He shall cover thee with his feathers, and under his wings shalt thou trust," Psal. xci. 4. "I will trust," said the Psalmist, "in the covert of thy wings." In these places there is a manifest allusion to the wings of the cherubims overshadowing the mercy-seat. When the pious Hezekiah was in imminent danger from the numerous host of the proud Assyrian monarch, and had received his blasphemous and insulting letter, he spread it before the Lord, and said, "O Lord God of Israel, that dwellest between the cherubims; save us from his hands." The sword of flame was symbolical of God's anger for the violation of that tenure on which man had held the garden; the cherubims, of the Divine placability; that God, though angry, would still be propitious to the devout and humble penitent who approaching him by sacrifice, confessed himself guilty, and implored the Divine forgiveness, saying, in the language of the humble publican, "God be merciful to me a sinner!"

Adam, though fallen, could not but recollect what he had seen, what he had heard, and what he had enjoyed in his former state of innocence; and it is impossible to suppose otherwise than that he would communicate the affecting narrative of his pristine state to his children. Both his character as a man, and his feelings as a parent, forbid us to suppose the contrary. That such knowledge was communicated to them is certain, from the case of Cain and Abel, his immediate descendants; for we are told, that in process of time both brought an oblation to the Lord. The phrase, *in process of time*, signifies in the original, as Kennicott has remarked, *the stated, the appointed time*. Now, if there was a stated time for making such oblations, it must have been appointed by God, and observed by Adam; and, therefore, the knowledge of such

an appointment must have been communicated to them by him, and its observance they themselves must have previously witnessed. The difference of the two oblations, and the reason of the rejection of the one and acceptance of the other, belong to another subject; and it is therefore sufficient for our purpose merely to notice the fact as evidential, that Adam communicated information to his children; and the fact that the sacrifice of Abel was an animal one, proves that the knowledge of an atonement, to be made by a future Redeemer, was derived from his parents, and must have been so in connexion with that of the creation and the fall. Thus knowledge would be communicated both by tradition and the observance of the wonted time and rite of animal sacrifice. Not only was this knowledge preserved in the time of Seth, whose descendants called on, or publicly invoked the name of Jehovah, but also by further discoveries of the Divine will graciously communicated to the patriarchs of that line. Of this there is a remarkable instance in the case of Enoch, the seventh from Adam. This venerable personage, who walked with God for the space of three hundred years after the birth of Methuselah his son, we are told by an inspired Apostle, foretold the advent of the general judgment, when "Jehovah would come with ten thousands of his holy ones to execute judgment upon all, and to convince all that are ungodly among them of all their ungodly deeds which they have ungodly committed, and of all their hard speeches which ungodly sinners have spoken against him." This important additional truth revealed to the antediluvian world by means of Enoch—constituted a strong proof of God's care of the work of his hands, in communicating from time to time such discoveries of His nature and designs as were calculated to comfort the godly and alarm the wicked, and preserve alive amongst them a knowledge and belief of a superintending Providence, a promised Deliverer, and a future state.

If then the knowledge of a former state and the hope of a future state were thus preserved by tradition and providential care, the knowledge of such arts and such sciences as were necessary for human subsistence and human comfort would also be preserved. Man was now to till the ground in order to earn his food. He was now to cultivate a barren and ungrateful soil, vastly different from that which Jehovah had originally blessed, the soil of paradise. Horticulture was now exchanged for the labour of tillage. Cain followed this profession, whilst his brother Abel was a keeper of sheep. We are also told that Cain built a city after he had murdered his innocent and righteous brother, and gone out from the presence of the Lord (of which the cherubims were the symbols), for

this city was in the land of Nod, which lay to the east of Eden; and, therefore, in going thither, he turned his back on the cherubims, at which Adam and his wife worshipped. Two of Cain's early descendants, Jubal and Tubal-Cain, invented the harp and organ, and were artificers in brass and iron, whilst Jabel was the father of such as dwelt in tents. The musical instruments above mentioned are denominated in the Hebrew, HUGGAH and NABLION. We are not to suppose that the former of these was that noble and complicated machine, the modern organ. According to the commentators, it signifies the *syrix* or *fistula*, the pipe of Pan. NABLION is the Hebrew name for harp. In the Septuagint, Syriac, and Chaldee, paraphrase, these terms are differently translated in each. This is owing to the ignorance of both ancient and modern translators as to the real forms and properties of the Hebrew musical instruments, which has caused them to give them such names as were applied to those most commonly used in their own countries. But whatever they were in particular, their invention implies civilization. When it is said that Jabel was the father of such as dwelt in tents, and fed cattle, we are not to suppose that he led a pastoral life merely, for so did Abel before him; but that he was the father of such as led a wandering life, in opposition to those who dwelt in cities and followed agricultural and mechanical employments; of such as moved from place to place with their tents and herds, as they found pasture, like the Arabs and Scythians of the postdiluvian world. Another reason, perhaps, may be assigned for mentioning this circumstance concerning Jabel; that Abel, who preceded him, died without posterity, and therefore the pastoral life was abandoned, or, rather, not renewed till his time.

These facts evince, that in the earliest periods of the antediluvian world men were acquainted with the arts of agriculture, architecture, music, and working in metals. The ground is not tilled, nor are cities built, nor are musical instruments invented by savages, but by men highly advanced in civilization. The very fact that they wrought in brass and iron, proves a considerable advancement in Arts and Sciences. The Peruvians in South America, who made the greatest approaches towards civilization of all the American tribes, were ignorant of the use of iron, and were, consequently, behind these antediluvians in the arts of civilized life. If such inventions were produced by the descendants of Cain, who imitated him in his apostasy, and contributed so much to the moral degeneracy of the antediluvian world, it can hardly be supposed that the righteous descendants of Seth, men who called on the name of the Lord, were behind them in any branch of knowledge that was really useful. There can

be no reasonable doubt but that Noah, the last of that race, possessed a competent knowledge of what arts and sciences were then cultivated. The very fact of his building the ark, under Divine direction, for the preservation of himself and family during that universal deluge, of which he was graciously forewarned of God, proves considerable knowledge in the mechanical arts, as many were probably employed in the construction of that vessel.

Whether the antediluvians were acquainted with navigation it is impossible to determine. We cannot infer from the history of the building of the ark, that the art of ship-building was known to them; for though it was undoubtedly fabricated by human hands, its model and dimensions were divinely suggested to the antediluvian patriarch. It must be remembered also that the ark was not a ship. It had neither oars, sails, rudder, nor anchor; and was therefore not adapted for sailing, but floating; for we are told that *it was borne, or went upon the face of the waters*.

What of antediluvian science and art Noah possessed, he would communicate to his immediate descendants, in the postdiluvian world. We know from scripture that the knowledge of agriculture, of architecture, and vintage, (perhaps) was preserved. We are told, that Noah, after he descended from the mountain on which the ark had rested, and settled in the vicinity of Ararat, became an husbandman, and planted a vineyard. The Armenians have a tradition, that this vineyard was in the spot where now the city of Erivan stands, twelve leagues NNE. of Ararat, where they still make excellent wines.

It is thus sufficiently clear, from the Mosaic account of the antediluvians, that they were not savages, wandering wild in the woods and living on acorns, and that they rose gradually to civilization by their own unassisted efforts. It does not follow, that because the antediluvians grew exceedingly wicked, therefore, they either were or became savages. The building of cities, and the invention of particular arts, sufficiently attest their civilization. From their great longevity, and the nature of the human mind, the invention of arts, and the extension of knowledge was unavoidable: this much must be granted. It is also clear that civil societies existed before the flood, else how could they have built cities or invented arts? Though the several civil communities must then have been more closely connected by the remembrance of one common origin which could not but be preserved by their longevity, by the propagation of the same traditional customs, and by the use of one common language; yet it is evidently impossible that they could form one great body politic, on the supposition that the population of the antediluvian world was vastly greater than after the

deluge. The difference of moral and religious character that distinguished the descendants of Seth and Cain would prevent this, till the corruption became gradually general, and finally universal: but the phrase, *that the earth was filled with violence*, intimates sufficiently the existence of distinct political societies.

The family of Noah continued no longer together as one aggregate society on the plains of Shinar than God saw necessary to permit. Two circumstances, perhaps, contributed to the spread and increase of that depravity which was contracted by the fall—the unity of language, and the longevity of the antediluvians. As unity of language is a powerful bond of union, so the longevity of the antediluvians would be a powerful principle of increase. Mankind, already corrupted, would consequently become more rapidly and extensively wicked, and the baneful effects be more mischievously felt. To prevent this depravity from recurring in all that hideous form in which it had previously appeared, and that the different regions of the postdiluvian world might be sooner peopled, seems to have been the design of God in the confusion of languages at the building of the tower of Babel. For what design this building was erected it is difficult to determine, commentators having gone into very different opinions on this subject. The opinion that it was built as a place of refuge in case of a second deluge, is so absurd as to merit no refutation. The other opinion, that it was to serve as a mark, or signal, as a watch tower, which is the opinion of the learned Perizonius, by the sight of which, or of a signal made from its top, they might be prevented from wandering in the expanded plain of Shinar (the first men being shepherds with their flocks,) and be brought back to the city which they had built, being unwilling to disperse themselves, is little preferable. For, in the first place, where is the proof that they were shepherds? for the Mosaic narrative does not mention a single word respecting their occupation. Secondly, where is the proof that they had already built the city; or that it was built before the tower was attempted? Besides, the notion of building a city and tower, does not well accord with their occupation of shepherds: as pastoral tribes do not generally build cities. Thirdly, they could not but know, from experience, that neither a single city, nor such an extent of country as this tower and the signals upon it could command, would suffice for the sustenance of their posterity, continually increasing and multiplying; especially if it be supposed, with those who follow the Septuagint, that it was begun five hundred and thirty-one years after the flood; or the Samaritan, which fixes it four hundred and one years after the same event.

From the blessing of fecundity pronounced on

Noah and his descendants, and the longevity of the postdiluvian patriarchs, the multiplication of the human race must have been much more rapid than in modern times, and the terms of doubling vastly shorter than any which can at present be applied to the increase of mankind. Upon the system of the Septuagint chronology, it is impossible that the whole human race could have been contained in the plain of Shinar five hundred and thirty-one years after the deluge, and much more so that all should have been shepherds; for if the plain could not sustain the numbers, it could much less support their flocks. If Noah himself was a husbandman, many of his descendants at that early period must have been so too. How therefore, could the tower of Babel be intended as a signal to prevent themselves and their flocks from wandering in the plain of Shinar? It would seem that this undertaking was commenced soon after their first migration from the vicinity of Ararat, and finding Shinar to be a large, fruitful, and expanded plain, watered by two navigable streams, they designed to make this their permanent abode: and the city and lofty tower which they, in concert, attempted to build, was to serve as a monument of their common origin, establishment, and future fame; to be the central spot, around which they might settle, the capital of the new world, and be a bond of union to the whole community. But the very means they used to keep themselves as long as possible together, served to hasten an event which must sooner or later, in the lapse of time, have taken place though no such attempt had been made. The undertaking displeased the Lord; whose design it was, that they should not continue, as one vast body, long in one place. If, as Usher supposes, this event took place about one hundred and two years subsequent to the deluge, the numbers of mankind then existing amounted, by his calculation, to 780,000. But it is impossible to form any thing like an exact calculation of the numbers of mankind and the ratio of their increase in these early ages.

The scripture narrative of the origin and early history of the human race has thus been brought down to the confusion of languages, and dispersion of the builders of the Tower of Babel, as announced in our plan of treating the subject. We now come to notice the opinion of those who imagine that universal savagism was introduced by the confusion of tongues, and to evince that such an opinion is unwarranted by scripture, and the evidence of facts there recorded. The abbe Goguet supposes that new languages were then formed amongst the whole of mankind; and that consequently all society was dissolved, families living detached from one another, speedily sunk into the profoundest ignorance. Bishop Cumberland, in his notes

and translation of Sanchoniathon, maintains the same thing, that all mankind were rendered savages by the confusion of tongues at Babel. "For," says he, "by confounding the language of man, and scattering them abroad upon the face of all the earth, men were rendered savages." Goguet affirms the same, still more decidedly, "add to this, (he says) the consideration of the tumult and disorder inseparable from new establishments, and we shall soon conceive how there was a time in which almost the whole world was plunged into the utmost barbarity; men wandered in the woods and fields, without laws, without leaders, or any form of government. Their ferocity became so great, that many of them devoured each other. All kinds of knowledge, even the most common and necessary, were so much neglected, that not a few had forgotten the use of fire. It is to these unhappy times, that we must refer what profane authors say, of the miseries which afflicted the world in the first ages. All ancient traditions declare, that the first men led a life very little different from that of beasts." The learned and diligent authors of *The Ancient Universal History* are nearly of the same sentiments.

The immediate result of the confusion of languages, was, no doubt, the dispersion of the builders: but we are under no necessity of supposing that their migrations were to very distant regions, or that they immediately and necessarily became savages. Such pictures of the state to which the human race were reduced by that event are caricatures, not real representations of fact. For of what authority are a few Pagan poets, tragedians, and philosophers, respecting the first ages consequent on the dispersion, and placed so far beyond the period of history. The histories of Greece and Rome, and of the Western world in general, commenced at a very late period, a period long subsequent to that of the dispersion: are we then to infer from such authorities as those above mentioned, that all men were once savages; or that, because it was once so with their own ancestors, that the same was universally the case over all the inhabited globe? are we to believe all this, on the authority of men whose knowledge of mankind at large was so circumscribed, and which reached but to a very few centuries beyond their own time, and concerning which, they had nothing to build on, but dark, indistinct, and imperfect tradition? Surely not.

It is very extraordinary that those who deny the Divine communication of language to Adam in innocence, should believe that a great many new languages were communicated to

his fallen descendants instantaneously. It is much more rational to conclude that the primeval language was broken into a number of dialects, which, though having many words in common, yet would differ so far as to cause a misunderstanding amongst them, or such a confusion of ideas, as would create a correspondent confusion of words. Although it be now impossible to trace up all languages to one common root, or primitive tongue, and the increasing knowledge of new languages proportionally increases the difficulty of tracing them to one common origin, that no more disproves the former existence of one common language, of which existing original languages are branches or dialects, than the fact that no man living can trace up his ancestors to Noah, can disprove the descent of the present race of human beings from that patriarch. It is well known that the Hebrew, Chaldee, Syriac, Arabic, Ethiopic, and Punic or Phœnician, have so many words, phrases, and even grammar rules in common, that it can hardly be denied that they were originally one language, or cognate branches of the same root. It is also now known that there is a wonderful harmony of the Latin, Greek, and Sanscrit languages; and that the similarity is so striking between the Sanscrit, and the Zend and Pehlivi, branches of the ancient Persic, as almost to prove their original identity. It is also equally well known that the farther back the Hebrew and Arabic can be traced, the greater is the similarity betwixt these two, inasmuch that the language of the book of Job, unquestionably the oldest in the world, is denominated Hebrew Arabic. For proof of this, the curious and learned reader may consult Schultens, Michaelis, Reiske, and Mason Good.

Let us now turn from the reveries of Plato and the absurd fictions of Sanchoniathon, to the sober history of Moses. Does he say, in the language of Goguet, that all society was dissolved by the confusion of tongues; that every family had a distinct language, and were consequently compelled to live by themselves? Does he say, that all mankind, but a few families excepted, led the life of savages and barbarians; that their state was exactly that of the Cyclops or one-eyed giants of Homer? It may be asked, on the principles of Goguet, how these few families retained their civilization, and became not savages like the rest; as, according to him they were placed in the same calamitous state with all the rest; for he affirms that all without exception were at the building of this tower, and must therefore have shared the same fate? I ask again, how came these few to retain their civilization and knowledge, since they were placed in circumstances exactly similar to all the rest of mankind then living? The

same causes produce the same effects in circumstances precisely similar. If the formation of new languages necessarily produced savagism, it must have produced it on all on whom the miraculous energy was exerted; and according to him and Cumberland, it was exerted on all, as all were concerned in the building of that tower. We shall place them between the horns of a dilemma; and it is this—they must either say, that savagism was the necessary effect of the confusion of tongues, or that it was not. If it was the former, then all without exception must have become savages, and then what becomes of the exception. If the latter, then they contradict their own doctrine. The effect was contingent, not necessary. Either all mankind were involved in this transaction, or they were not. If all mankind were not involved in it, then those, and those only who were so, were reduced to a state of savagism, whilst the rest retained their original antediluvian language and civilization. These authors, however, affirm the former, and deny the latter; therefore all necessarily became savages. But the assertion of Goguet, that a few families preserved their civilization notwithstanding, overthrows the whole fabric, because if a few really did so, all might have done so; and then the effect was not necessary, but contingent.

That the confusion of languages was not followed by universal savagism, is plain from the narrative of Moses. No doubt, if in the scattering of the builders, any of them were driven to a very great distance, and in very small tribes, these circumstances would greatly tend to reduce them to the savage state. It is evident, however, from Moses, that the descendants of Shem and Japheth were not scattered over all the face of the earth. Those of the former settled in the vicinity of Shinar; and if they were among the builders, which is not absolutely certain, it does not appear that they suffered much from the confusion of tongues, much less that they became savages. It appears, on the contrary, that they possessed considerable knowledge, and built cities, as Resen, Rehoboth, Calah, and Nineveh, and it must be remembered that savages do not build cities. One of Shem's descendants, Terah, the father of Abraham, is represented in oriental tradition as a statuary, whilst, on the same authority, Abraham himself is said, to have been skilled in astronomy. It is true indeed that Terah was an idolater; but that does not necessarily imply that he was a savage, or else we must call the polished Greeks and Romans by the same epithet. The Aramites built, long before Abraham's day, the cities of Haran and Damascus, which implies their early civilization. Nor did Ham himself nor his descendants, though admitted by all to have had the chief share, if not the only hand in the

building of this tower, become savages in consequence of the dispersion. So far from this, they retained all the wisdom of their antediluvian ancestors, and became the future instructors of Greece and Rome. The Egyptians, it is plain from Moses, were, in the earlier part of Abraham's history, a powerful and a polished people, near five centuries before the Exodus of the Israelites from that country: nor is there any proof that ever they were savages, but much to the contrary. So far from this, it was supposed to exalt the character of Moses that he was learned in all the wisdom of Egypt; and the great Solomon, is said to have excelled in wisdom, all the wisdom of the East and of Egypt.

Sir Isaac Newton, indeed, in his *Chronology of Ancient Kingdoms Amended*, has attempted to show that the Egyptians were barbarians till the days of Osiris, whom he endeavours to identify with the Sesostris of profane history, and the Shishak of scripture. According to him, the Egyptians had neither literature nor science till the days of Solomon and his successor, Rehoboam, or 915 years before the Christian era, for so late does he fix the building of the temple. It necessarily follows, according to his theory, that though Egypt had existed as a monarchy before the call of Abraham, even almost from the days of Mizraim, or nigh a period of 1,200 years, its inhabitants had during all that time been barbarians or savages. This is one of the most extraordinary averments ever put forth; and which, had it been advanced by any other but Newton, would have been immediately scouted out of the literary world. He affirms that Osiris, Sesostris, or Shishak, invented the culture of the vine, abolished the practice of cannibalism, which, till then, he thinks had been quite common in Egypt; that his wife and sister, Isis, taught the Egyptians to sow corn, and gave them their first system of laws; that both these personages were the professed patrons of nascent arts; and that all the instruments of husbandry were discovered in their reign. Now all these fine discoveries were made, it seems, but two generations before the Trojan war, which he makes coeval with the building of the temple, full 500 years after the Exodus, and more than 700 years after the days of Joseph. Instruments of war, military horses, alphabetical characters, exact distribution of property, the use of animal food, were all by his account inventions so late as the days of Shishak. One would imagine, that if cannibalism had been common in Egypt till then, there was no necessity to teach the Egyptians the use of animal food; for, so far as that is concerned, man is an animal like others, and those who could feed on men, could feed on beasts also.

All this is in direct contradiction to the inspired record, and the truth of ancient history.

If the Egyptians were so barbarous as Sir Isaac has stated, and continued so long under that barbarism, having not even so much as an alphabet, and, therefore, no books, it was surely no great compliment which the protomartyr, Stephen, paid to Moses, when he said that he was learned in all the learning of the Egyptians. It is giving a direct lie to the inspired orator; for how could Moses be said to have been learned in all the learning of a people who had none, who could not so much as cultivate the ground? and supposing that they did know the first principles of agriculture, and nothing more, it was still but poor praise to say, that he knew nothing more than a common husbandman. When it is said that he was learned in all the learning of Egypt, it is plainly implied, that it was very great, and such as qualified him, not merely to be the leader, but also the lawgiver of a numerous people. He was bred up at court, was Pharaoh's daughter's adopted son, and whatever wealth could procure, in the way of instruction, was given him. Are we to believe the above representation of Sir Isaac Newton, given on the authority of a few vain, arrogant, and mendacious Greeks, who, when the fortune of Egypt was sunk, had the impudence to turn round on the fallen Egyptians, and tell them, that they, the Egyptians, got all their learning and their religion from them (the Greeks), and that their gods as Osiris, Isis, and Orus, and others, were ancient Grecian deities with new names? Are we to believe all this, in opposition to scripture and the earlier Greeks, who acknowledged that Egypt was the parent of their science, their religion, and their arts?

That the Egyptians were a refined people, we find in what is recorded of them in the days of Abraham. We see the splendour of a luxurious court, in the princes of the monarch's household, amongst whom, (as the surest way to obtain royal favour,) some are found to have been his pimps of pleasure. "The princes also of Pharaoh's court saw her, and commended her (Sarah) before Pharaoh: and the woman was taken into Pharaoh's house." The presents made by Pharaoh to Abraham appear altogether worthy of a great prince. The affair which took place between Isaac his son, and Abimelech, will show us the difference between a king of Egypt and a petty Philistine prince. The latter is described without his guards, or great princes, and so afraid of the rising power of Isaac, that he obliged him to quit his dominions; and, not satisfied with that, went afterwards to beg a peace of him, and would swear him to the observance of it. In the days of Jacob, a caravan of Ishmaelite merchants going from Gilead, went down to Egypt with cargoes of spices, balm, and myrrh, carried on the backs

of camels, and a number of young slaves. Now, such a traffic, and such commodities, fit only for a rich and luxurious people, clearly evince the established power and wealth of Egypt. We find a captain of Pharaoh's guard, a chief butler, and a chief baker. We find splendid vestments, fine linen, gold chains, and state chariots, given to Joseph, as so many proofs of luxury and refinement; and in the cities, for laying up stores and provisions against the impending famine, we equally discern the marks of policy and opulence. We find the enslaved descendants of Jacob employed in building treasure cities; and the employing for so long a time such vast multitudes in only preparing materials for public buildings, sufficiently bespeak the great power and luxury of Egypt. We also find a standing militia of chariots, and, what is still more wonderful, of cavalry—a species of military unknown to the boasting Greeks till long after the siege of Troy. What says Moses when describing the pursuit of the Israelites by Pharaoh, "And Pharaoh made ready his chariots, and took his people with him. And he took six hundred chosen chariots, and all the chariots of Egypt, and captains over every one of them. The Egyptians pursued after them, (all the horses and chariots of Pharaoh, and his horsemen, and his army,) and the Egyptians pursued, and went in after them to the midst of the sea, even all Pharaoh's horses, his chariots, and his horsemen." Sir Isaac says, "In the days of Moses, all the chariots of Egypt, with which Pharaoh pursued Israel, were but *six hundred*." It is surprising that a man who calculated with precision, formerly unknown, the motions of the planets; a man so famed for his philosophical caution in admitting nothing into his system without the clearest proof, should have read his Bible so carelessly. The six hundred chariots there mentioned were *chosen chariots* for the royal guard; so that over and above these, *all the chariots of Egypt*, an indefinite number, went on the pursuit. The number of horses besides is not to be estimated from the *chariots*, because there was an army of horsemen also on that pursuit. We read also of the royal chariot in the days of Joseph, more than 200 years before, and of the second chariot, in which rode the saviour of Egypt, Joseph himself. As to animal food, it is clear, from the dreams of the baker and butler, that the Egyptians both ate animal food and drank wine. In the feast which Joseph gave his brethren, animal food was used. "Bring these men home," said Joseph to his steward, "and *slay*: for these men shall dine with me at noon." The Israelites in the wilderness bemoaned their hard lot that it was not then as before, when in Egypt they sat by the *flesh* pots, and did eat bread to the full. We also read that the Is-

raelites, previous to their departure, borrowed jewels of gold, and jewels of silver, and raiment, and spoiled the Egyptians; but no such articles could have been borrowed from savages.

Throughout the Bible account of Egypt, it is uniformly represented as one kingdom, not as many, or at least four independent states, as has been imagined by Marsham, Newton, and the learned authors of the *Ancient Universal History*. Who could imagine, but one who had a hypothesis to support, that the frequent repetition of the phrase, *all the land of Egypt*, means only a small dismembered kingdom, or one of the four small states into which they suppose Egypt to have been divided? Thus it is clear from scripture, that Egypt was a highly civilized and extensive kingdom from the most remote antiquity, at an era long before the existence of pagan historical records; and not a nation of savages and cannibals till the days of Sesostris or Shishak, as Newton represents them to have continued. We refer the learned and curious reader to the second volume of Warburton's *Divine Legation of Moses Demonstrated*, a volume replete with profound and varied erudition, and with ingenious and masterly criticism, where he will find the high antiquity of Egypt demonstrated, both from scripture and the early historians; and the theory of Newton, Shuckford, and others, completely overthrown. We also refer to the elaborate dissertation of the learned Dr. John Solomon Semler, of Halle, on the Dynasties of Manetho, where he shows, against Newton, Marsham, and others, that these were successive, not collateral.

The other descendants of Ham, as the Cushites, Canaanites, and Philistines, were not savages, but to all appearance polished and civilized tribes. Even the mighty Nimrod the founder of the earliest kingdom recorded in scripture, was the grandson of Ham. Now, savages neither found monarchies nor build cities. Nimrod, we are told, possessed, if he did not found, the cities of Babel and Erech, and Accad and Calneh; and all these were in the land of Shinar, where the confusion of tongues took place. Now, the Cushites were the progenitors of the ancient Ethiopians of Abyssinia, and perhaps of those of the ancient Meroe or Merawe, a highly civilized people, so much so indeed, that the ancient Egyptians, as Diodorus Siculus informs us, were contented at one time to be thought their scholars. Homer talks with rapture of the piety of the Cushites or Ethiopians, and sends Jupiter and the Olympic court every now and then to revel twelve days amongst that people. In short, the concurrent voice of scripture, and the most ancient profane history shows, that the confusion of tongues, and the consequent dispersion of mankind, by no means produced universal savagism.

Whilst some have declared for an uncivilized state, introduced by the catastrophe at Babel, others, and these infidels and materialists, have declared for the original and universal savagism of mankind. Moschus the Phœnician, Democritus, and Epicurus, appear to have been the first abettors and chief champions of this base sentiment, and were followed by a numerous tribe of rhapsodists and poets among the Greeks and Romans, men unquestionably devoted to fable and fiction. This opinion has been revived in modern times; and by far the greater part of the most fashionable names in modern philosophical science have declared for the original barbarism of man. Some have espoused and defended it, to flatter human pride; some to support the doctrine of the infinite perfectibility of man; some to support the doctrine of materialism, and overthrow that of a future state; and others, as Rousseau, from an excessive love of singularity and paradox, to get themselves stared at as men of original genius. When the academy of Dijon proposed the question as a prize essay, "Has the revival of the Arts and Sciences contributed to the refinement of manners?" Rousseau was at first inclined to support the affirmative. "This is the *pons asinorum*," (asses' bridge), said a philosopher then a friend of his, "take the negative side of the question, and I'll promise you the greatest success." The philosopher took the hint, boldly crossed the asses' bridge, and maintained the superiority of savagism to civilization, and of ignorance to knowledge. He gained his point, and obtained the approbation of that academy. The philosophers and he agreed that men were originally savages; but they differed in this, that the former esteemed it as the chief glory of man, that he had raised himself from that rude and barbarous state, to one of civilization and refinement; that man was a progressive animal, and that no terminus could be set to his progress; whereas Rousseau maintained the very contrary position, that what they called progress, was retrogression; that knowledge had deteriorated man; that virtue was not to be found in the abodes of science and refinement, but amidst the savages who traversed the woods and wilds of unimproved nature. He went farther, and published an essay on the original equality of man, and attempted to prove that men were made not for society but solitude; that the appetite for society was factitious, not natural; that society had perverted the order of nature, had introduced all that inequality which now reigns, and overturned that happy equality which constitutes the felicity of man; and, finally, that the state of savagism, or, as he terms it, Nature, was that in which man was to be seen in all the benevolence and dignity of his mind: in other words, that education and knowledge had

ruined him. The paradox, however, was not new, but it was supported with all the reasonings that advanced knowledge and originality of thinking could give it. Ignorance, with some of the Greek and Roman poets, had formed the happy excellence of the golden age. Josephus and several of the Fathers maintained a similar doctrine, and affirmed that Cain was the founder of society, and overturned that happy simplicity and ignorance which characterized the patriarchal life, by inventing weights and measures—by setting bounds to landed property—by walling the city which he himself had built, and obliging his associates and dependants to live together in one community, the better to secure their ill-gotten wealth. This strange doctrine became popular amongst the Platonists and early Christians, as it favoured the growing passion for an ascetic life and retirement from the world, which in after ages produced that innumerable swarm of hermits and monks which disgraced Christianity, and which passion still continues popular in the bosom of the Roman Catholic church. Rousseau's singular opinions became popular both in France and other countries, especially during the disastrous period of the French Revolution, when it became fashionable to talk of the virtues of savages. Voltaire helped to spread the delusion by his *Ingenueus Huron*, and *Confessions of a Savoyard Peasant*. The praises of savagism and the original equality of man were sounded in every quarter of the new French Republic, till they grew perfectly stale, and mankind became practically convinced of the absurdity of these opinions.

Lord Kalmes, in his "Sketches of the History of Man," is a staunch advocate for the universal savagism of man, and would fain infer from some facts which he states, amongst which that of colour is one, that God created many pairs of the human race at first, and that from these have proceeded as many distinct races of men; and that they all depended entirely on their natural talents for their advancement from savagism to civilization. He acknowledges that the Mosaic account is unfavourable to his system, and opposes insuperable objections. "Whence then," says he, "the degeneracy of all men into the savage state? To account for that dismal catastrophe, mankind must have suffered some dreadful convulsion. For, by confounding the language of men, and scattering them abroad upon the face of all the earth, they were rendered savages." He appears fond of the system of universal savagism, and would fain father it upon Moses; and having adopted this conclusion, he proceeds to trace the gradual advances of man from that state to civilization, in consequence of his natural powers. It is clear, however, that whether men were originally savages, or made so by the confusion

of tongues, according to Cumberland and Kalmes, they must have remained so but for a Divine providential interference, or a succession of miracles. Those who maintained the opinion of original savagism in the pagan world, were staunch assertors of the eternity of matter, and absolutely, and totally denied any such thing as creation, whether *ex nihilo* or from pre-existent matter. They affirmed that man sprung from the earth like his brother vegetables; that he had neither ideas nor speech, and that many ages elapsed before the race acquired the use of language, or attained to greater knowledge than the beasts of the forest. It is truly amazing that any should be found in modern times, and in this enlightened age, to favour such monstrous nonsense, which originated in the darkness of paganism; and yet such have been found in a Hume and a Menbode, which latter learned gentleman supposed that men had tails originally. But such an opinion, while it is opposed to the humiliating doctrine of scripture, which affirms the degeneracy of man from his pristine state, also flatters human pride; for on this hypothesis man, originally a dumb animal, has gradually raised himself from that incipient condition of existence to his present exalted state by the gradual developement of his powers. He was originally, according to them, a stupid irrational mere brute, and the first stage of his progress was that of uttering wild inarticulate cries or roars, like his brother animals; then a number of them gradually associated together for mutual defence; this produced a change from the inarticulate cry to articulate speech, when conventional signs were invented for mutual communication and defence, and language was thus formed. Then commenced the progress from savagism to civilization. They were first hunters and fishers; then shepherds; then agriculturists; and then followed commerce, which produced the knowledge of Arts and Sciences.

Upon the hypothesis stated above, that man was originally a savage destitute of the use of speech, and, in the strictest sense of the words, a dumb, irrational animal, the great difficulty is, how he could emerge from such a state, and become finally the enlightened and civilized creature he now is. To remove this difficulty, the modern advocates of original savagism furnish this *mutum et turpe pecus* with an indefinite number of instincts, or internal senses, with which they say he was originally endowed, and by which, without reflection, he is immediately not only enabled to distinguish between right and wrong, and prompted to do all that is necessary for the preservation of his own existence and the continuation of the species, but also led to the discovery of what will contribute, in the first instance, to the ease and conveniences of life. These instincts they think brought man-

kind together, when the reasoning faculty, hitherto dormant, being now roused by the collisions of society, made its observations upon the consequences of their different actions, taught them to avoid such as were pernicious, and to improve upon such as they had found beneficial; and thus civilization commenced. But this theory is opposed by insuperable objections, for they first assume and then prove, and though the assumptions were true, the conclusions would be still illegitimate. This savage is not a child either of God's creation or of Nature's productive power, but one of their own contrivance. Those bundle of instincts with which these gentlemen have furnished their savage, and which they denominate philosophy, is the product of mere idleness, and a complete chimera. Men may imagine what they please, furnish their savage, in order to answer their purpose, with as many instincts as they choose; but till they can prove by induction that he had, or that any savage has these, such modes of proof must go for nothing. Instinct could not produce language, or articulate speech, for if so, children would speak instinctively, would speak, as soon as the organs of speech were capable of performing their functions, without being taught, and they would all speak alike; and then, consequently, man would not, nor could be, the dumb animal which has been supposed.

It may be asked of these gentlemen, if this *mutum et turpe pecus* (whether produced by dame Nature's own hand, or those of a creating Intelligence, makes no odds as to the argument) was produced in the infantile state, or in that of full maturity. If the former of these be maintained, how came the helpless infant, to speak nothing of the mystery of its first production, to become a man? How was it reared? for rear itself it could not. If, notwithstanding the strength of the maternal passion, man, when an infant, is so tender and delicate an animal, that many, if not more than one half, die during the transition from infancy to manhood, in spite of every precaution that can be used in rearing him; how came the first pair, or pairs, if produced in an infantile state, helpless, forlorn, and destitute, as they were, to arrive at full growth? I cannot see how the difficulty can be solved.—If the latter be maintained, then this is at utter variance with all the known processes of nature, by which all animals, without exception, are produced in the state of an embryo-fœtus, and an infant. If they proceeded from the creating hand of Infinite Benevolence, are we to believe they did so in a state of infancy, and were dropt on the ground, and left there, utterly helpless and destitute, to arrive at a state of full maturity, under some unknown preserving process, of which not a single instance has been ever wit-

nessed by the human race or left upon record? If produced full grown, are we to believe that God created the first pair dumb and irrational animals, a couple of ourang outangs? The supposition is so inconsistent with all our notions of divine goodness, and at such utter variance with all established fact, that were not men determined, on set purpose, to oppose divine revelation, and gratify the pride of a faculty at war with its Maker, they could not believe it; and yet such ravings are dignified with the name of *philosophy*. Had this instinctive passion in the first race of men been of as enlarged a nature and been as safe a guide, as the instinctive philosophers affirm it to have been, it is perfectly clear that men could not have long remained savages, and there would not, at this day, have been a single savage tribe, or savage individual, upon earth. How comes it that, with all these fine instinctive principles, and appetite for society, so many savages are still to be found all over the globe? Such principles would have knit them together at the very first, and the progress of civilization would have commenced with the first pair as soon as they dropt from the Creator's hand; or even if we should suppose them to have been originally the mere natural produce of the soil. If the social affections of the first mortals impelled them into society, if their reasoning powers were roused by the collisions of society, and began a train of reasoning on what they had observed, and felt from these collisions, and thus commenced the career of mental improvement and civilization, surely the same affections and the same faculties would infallibly have produced the same results or similar effects, in every clime, in every age, and on every tribe of their numerous progeny. We should see mankind every where advancing in civilization, see the majestic march of intellect over all the globe. We should never see mankind standing still as they frequently do, and as oft retrograding. But very different is the case; numerous hordes of savages still exist everywhere, and many nations have remained absolutely stationary. We have nothing to do but step over to Asia, and witness the fact in the present state of the Persians, the Hindoos, and the Chinese. The wisdom of the east was long proverbial, but if a man expects now to behold wisdom in that quarter of the globe, he will find himself deplorably mistaken.

The origin of civilization therefore, does not lie in human instincts and propensities, carrying mankind forward as it were by a natural and necessary process, for the hypothesis is contradicted by fact, and the question must not be decided by mere theories, that serve only to amuse or to flatter men into a high conceit of themselves. It is extremely difficult, if not

absolutely impossible, to conceive how man, if originally dumb and destitute of ideas, came to speak. It is so contrary to all past and present experience, that it requires a more than ordinary portion of credulity to believe it, and of talents to define it. If one single instance could be produced of one human individual that spoke without being taught to articulate, and without having ever heard a single articulate sound, it might go far to prove the theory of the human invention of language. But that being below the lowest standard of savagism that the world has yet seen, should be the authors of so noble a discovery, a discovery without which no other discoveries could ever have been made, is so passing strange, that he who can believe it might believe any thing. Not one has been yet able to explain the transition from the inarticulate cries of the dumb irrational animal, to the articulate language of an intelligent being; or in other words, to tell how the brute became a man. They have made the assertion, and on them the *onus probandi* lies.

Others who assert the human origin of language in consistence with their belief of revelation, are not chargeable with the absurdity of making a savage the inventor of a language, a hypothesis at variance with universal experience and fact, and with the Mosaic narrative. They do not represent man by nature the human brute of Epicurus and lord Monboddo, but allege that sounds either excited by passions, or produced by imitation, would necessarily be formed, so as to produce an inarticulate language which would ultimately suggest the idea and supply the elements of more perfect speech. These theorists are the able Condillac in his *Essay on the Origin of Human Knowledge*, Batteaux in his *Principles of Literature*, and Gibiline in his *Monde Primitif*. But this theory does not at all solve the difficulty, nor advance us one step in the discovery. Man is still supposed to be a human brute, though not a dumb one, seeing he could both cry and imitate the cries of other animals: but how inarticulate sounds could suggest to his mind the idea of articulation is incomprehensible. The transition from the simple vocal sound to the distinct articulated sound, is still unexplained. Lord Monboddo tells us of a savage caught in the woods of Hanover, who, though by no means deficient in his mental powers or bodily organs, was yet utterly incapable of speech. Now this savage, called Peter the Wild Boy, could both cry and imitate the cries of such animals as he had heard, but these inarticulations never suggested to him the idea of speech. The same theory is supported by Dr. Adam Smith, in his dissertation on the origin of language, and by Mr. Dugald Stewart, in his *Elements of the Philosophy of the Human Mind*, who have endeavoured

to explain the process by representing that the words originally used as proper names of individuals, came to be successively transferred to other individuals, until at length each of them became insensibly the common name of a multitude. But it still remains a question how man came to articulate without an instructor, or the hearing of such sounds. How does the Abbe Condillac solve this difficulty? He shall answer for himself. He admits the operation of articulation to be very tedious; for that the organ of speech in full grown persons, for want of early use, would be so inflexible that it could only articulate a few simple sounds, and the obstacles which prevented them from pronouncing others, would prevent them from suspecting that the voice was susceptible of any farther variation. Now, would not the obstacles above mentioned for ever prevent any articulations, or even sounds, beyond those which the passions might excite, or other sounds suggest? What is his reply to this difficulty? The child, from the pliancy of its vocal organs, being freed from the obstructions which prevented the parent, will accidentally fall upon new articulations, in its endeavours to communicate its desire to its parent for a particular object; the parent will endeavour to imitate this sound, and affix it as a name to the object, for the purpose of communicating with the child, and thus by successive and repeated enlargements of articulation in subsequent generations, language would finally be produced. Such is the solution of the origin of language presented by human wisdom. By this plan, we are sent to the accidental babble of infancy for the origination of that which it confesses, must exceed the power of the imagination to invent, and of the organs of the man to accomplish—thus inverting the whole process of nature, by supposing the adult to learn the use of speech, by imitating the infant, and, to complete the absurdity, assuming, without proof, that the child could utter articulations undirected by any pre-existing model.

Those who attribute the first formation of language to Adam, unassisted by divine instruction, although they avoid the difficulties attaching to the former hypothesis, yet fall into others equally insuperable, though of a different kind. In the scripture account of the creation of Adam, and God's dealings with him immediately subsequent to that event, the first exercise of language used by Adam, is stated to have preceded the production of his consort, Eve. He must therefore have devised instantaneously a medium of communication, before any other human being existed, with whom to communicate; he must have been able at once to apply the organ of speech, unexercised as it was, to the arduous and delicate work of articulation; and he must at once have attained the use of

words, without those multiplied preparatory experiments and concurring aids, which seem on all hands admitted to be indispensable to the discovery and production of speech. To obviate these difficulties, it has been said, that Adam was not only created with rational and moral powers in all that plenitude of perfection peculiar to a state of innocence and purity, but also with the knowledge of the exercise of these powers, that not only was the power of speech concentered with him, but also its practical application—that it was the necessary result of his constitution, that he could speak as well as think, or reason, the moment he commenced his existence. At this rate, the invention of language by Adam must be given up, as he could no more help speaking, than he could help breathing, or thinking. On this hypothesis, the exercise of articulation was as natural to him as that of his limbs, and he could no more be said to invent speech, than to invent walking.

From all these difficulties, insurmountable by any reasoning that has yet been used to attribute its origin to man, it is evident that language is not a human invention, but that the use of it was graciously communicated by God to the first man. So soon as man was created, and placed in Eden, we find that God communicated with him by language. "And the Lord God commanded the man, saying, Of every tree in the garden thou mayest freely eat; but of the tree of the knowledge of good and evil, thou shalt not eat of it; for in the day thou eatest thereof, thou shalt surely die." Now, Adam must have been previously endowed with the knowledge of language, otherwise he could not have known his duty to God as thus communicated, nor the terms of the divine constitution on which he held the garden. "Nothing is more evident from Scripture," says the learned Warburton, "than that language had a divine origin. God, we there find, taught the first man religion, and can we think that he would not at the same time teach him language? Is it said, he might gain language by the use of reason? It may be replied, So he might religion likewise, and this much *easier and sooner*." ¹ It must be remembered, also, that the laws given by God to the primeval pair respecting food for their preservation, (Gen. i. 29. ii. 9.) and the nuptial benediction pronounced over them, (Gen. ii. 22, 23.) together with the other discoveries of the divine will recorded in the beginning of Genesis, were communicated through the medium of language, and that the man and the woman are there expressly said to have conversed with God and with each other. If the powers and exercise of new languages were in-

stantaneously communicated to the apostles at Pentecost, enabling them to fulfil their divine mission of communicating to those Pagan nations (with whose language they were previously wholly unacquainted) the glad tidings of a common salvation, why should it be thought strange that God should instantaneously communicate the powers and exercise of speech to Adam? If such a gracious communication was deemed necessary by God in the one case, why should it not be deemed equally so in the other case? In both the propriety of a similar procedure is evident at first sight, and was therefore in both cases adopted by that Being who is equally wise as he is omnipotent. Nay, it may be said further, that the necessity of a divine interference was greater in the case of the first man than in that of the apostles, as in their case the knowledge of these languages was attainable by their powers in the way of instruction and imitation from human teachers, which was clearly impossible in the case of the first man; and therefore the propriety of such a divine interference in his case was, if we may so speak, more evidently requisite. Dr. Whitby, in his *Sermons on the Attributes*, vol. ii. p. 29., thinks the divine origin of language so evident, as to demonstrate of itself the truth of the Mosaic narrative of the original of the human race. Bishop Williams (Boylean Lectures, vol. i. p. 167.) affirms, that Adam, though he had a capacity and organs admirably fitted for the use of speech, yet, in his case, there was a necessity of his being immediately instructed by God, because it was impossible he should have invented speech and words to be spoken so soon as his necessities required. Dr. Beattie endeavours to prove the human invention of language to be impossible. (Theory of Language.) Dr. Johnson is so decided on the subject as to hold *inspiration* to be necessary to inform man that he has the faculty of speech, which I think, says he, he could no more find out without inspiration, than cows or hogs would think of such a faculty. Even by several of those who contend for the human origin of language, that faculty is admitted to be the indispensable instrument of thought, and that without it reason cannot be used by man. Condillac admits that *we think only through the medium of words*, in which opinion Lavoisier, in the preface to his *Elements of Chemistry*, coincides; and that *the art of reasoning is nothing more than a language well arranged*. Indeed, on what other principle than this is the art of reasoning called *logic*. Plato describes thinking as conducted by mental speech, τὸ διάνους διὰ λόγου or αὐτὴ πρὸς αὐτοῦ γογγυζὴ δὴν ἐκχεται; and in the philosophy of the Greeks *reason* and *words* are denominated by one and the same term λόγος. Now, if it be true that language is the necessary instrument of thought—that without it reason

¹ Divine Legation, vol. ii. pp. 81-2. Note.

cannot be used by man—that we think only through that medium—that logic is nothing more than well arranged language—that reason and speech were deemed so necessary to each other, that they were denominated by the identical term *logos*—how could language be discovered by reasoning, or how could reasoning have effected that by which alone its operations are conducted? If language be necessary to the existence of reason, it cannot have been its offspring; or, to use the words of Dr. Ellis, in his Enquiry whence cometh Wisdom, “Language cannot be contrived without thought and knowledge, but the mind cannot have thought and knowledge till it has language; therefore language must be previously taught before man could become a rational creature, and none could teach him but God.” Dr. Ellis, in the same work, shows, that Locke’s principles concerning the nature of language, although he did not see his way with sufficient clearness to lead him to the same conclusion, all perfectly corresponds to the above reasoning. Sussmilch, in an able work on the same subject, published at Berlin in 1766, has used the same principles successfully to establish the necessity of the divine origin of language. Even Hobbes himself, that noted materialist of the 17th century, admits in his *Leviathan*, c. iv. p. 12. that the first author of speech was God himself, who instructed Adam to name such creatures as he presented to his sight. Many even of the intelligent and philosophical ancients, totally unaided by revelation, were obliged to confess, that the discovery of this art surpassed all human power. Socrates himself, in the dialogues of Plato, is represented as saying that the first names were invented by the gods; and in the same work we are told, that the imposition of names on things, belonged to a nature superior to that of man, and that it could pertain only to him who hath a full discernment of their several natures.¹

Some have been obliged to pronounce language to be innate to man, from the impossibility of conceiving how language could be invented; as Dr. Shuckford, in his *Connexion of Sacred and Profane History*, vol. i. p. 109, and others. Such an opinion, however, is contrary to all principles of legitimate reasoning. It is clearly obvious, that if language were innate or instinctive to man—did he speak as naturally as he breathed—the first words uttered by all children would be the same; and that every child, whether born in a savage state or in a civilized community, whether in the desert or in the city, would understand the language of

every other child, however educated or however neglected; and on this principle no child would need to be taught, and every such attempt would not only be nugatory, but a violation of the order of nature, as it would be tantamount to an act of unteaching him that language which was natural to him, and forcing upon him an artificial language. On this principle all languages would be radically the same. Such a natural language could never be wholly lost, or so altered by subsequent circumstances of climate or country, society or savagism, but that all men of all countries would find it easy to communicate their mutual knowledge, and their mutual wants. On this hypothesis, etymology, that fallacious principle so apt to deceive the learned, would be an easy and a certain principle, the philologist having nothing else to do but trace the words of every language known to him up to this innate and radical language.

Enough has thus been said, and many will think it more than enough, an *opus operatum*, to prove the utter impossibility of the human invention of language, and therefore the utter absurdity of supposing that men were originally savages, or a *mutum ac turpe pecus*, as Horace says; and therefore that the Mosaic account of the origin of language and of man, as it fully solves the difficulties on these subjects, insuperable to every philosophical theory that has yet been invented by men, must be admitted as the only true and rational representation of the origin and primitive state of man. On this subject, as more immediately connected with the origin of language, the curious reader may consult the learned Bishop Warburton’s *Divine Legation of Moses Demonstrated*, vol. ii. p. 81, *Note*;—and the very learned Archbishop of Dublin, Dr. Magee, in his *Dissertations on the Doctrines of Atonement and Sacrifice*, vol. ii. pp. 1—24, *Note* on the divine origin of language, of all which we have availed ourselves on this keenly contested point.

It is truly surprising, that such a man as Dr. Blair, a Scottish presbyterian theologian, and who has obtained such fame in the literary world, by his *Sermons*, and his *Lectures on the Belles Lettres*, should have adopted and advocated the theory of the human invention of language, and ranged himself on the side of a Voltaire and a Monboddo. On the hypothesis of original savagism, the human race must have been for many years utterly destitute of all religion. In such a state of circumstances, man could not become a moral agent till he emerged from that state to civilization, till he had invented language; for how is it possible to conceive, that a dumb animal could be a moral agent? We might as well ascribe moral agency to a horse, or an elephant. On the supposition that men were created in this brutish state

¹ Polt Synopsis, Gen. ii. 9. Stillingfleet’s *Origines Sacrae*, B. I. c. i. § 3. and the *Evangelical Preparation* of Eusebius, Lib. XI. c. vi.

merely, and then left to shift for themselves, and to learn to speak, and to reason by the exercise of their own unaided powers, the Deity could not require their love, their gratitude, or their obedience, until once they had cultivated these powers, and discovered his being and perfections, and their relation to him as the work of his hands. It was impossible that such beings could be under a law, either external or internal, for the Deity could not exact that from them, which it was impossible for them to give, aye and until they had passed the transition state and become civilized. This consequence, however, does not enter into the minds of the greater part of the advocates of this opinion, as they consider man merely as a creature of this world. One of their number, however, Mr. Hume, the *Pacific Princeps* of the infidel school, has bestowed some attention on the subject, and favoured the world, not with a history of natural religion, but with what he is pleased to denominate a Dissertation on the *Natural History of Religion*. He tells us, that the first men could have no religion, as they were not qualified to contemplate the face of nature, and deduce from the frame and structure of the world the existence of an Intelligent Cause. He asserts, that the first notions of religion arose from men's examining into the various and contrary events of human life, and in this disorderly scene, with eyes still more disordered and astonished, they saw the first obscure traces of divinity, pp. 13—15. Consequently, aye and until they examined the disorderly scene of human affairs, they had no notions of a God at all, and how long it was before savage men examined such a scene, he has not told us. He tells us, that if men were left to themselves, in the circumstances in which the first men were placed, they could not but be idolaters; and then asserts that the first men were left entirely to themselves, and were therefore necessarily idolaters. If we consider, says he, the improvement of human society from rude beginnings, to a state of greater perfection, polytheism and idolatry was, and necessarily must have been, the first and most ancient religion of mankind. He again pronounces it impossible, that theism could, from reasoning, have been the primitive religion of the human race. Mr. Hume proceeds on the assumption that the first men were savages, and necessarily so, till once they were enlightened by the gradual developement of their powers; and if we grant him the truth of the assumption, his doctrine is undoubtedly true. But we will go farther than he does, and affirm, that if the first men had been in the circumstances he has assumed them to have been in, they never would have had any religion at all, whether idolatry, or pure theism. We affirm, that if man had been left in such cir-

cumstances, he could never have invented language, and if so, he could never have reasoned, and consequently never have found out the existence of invisible beings superior to himself. Had the first men been such mere animals as Hume has represented them, pressed with numerous wants and passions, having no leisure to admire the regular face of nature, and to make inquiry into the causes of the order of things, then we affirm that they would ever have remained so, and would never have found leisure to examine nature, and pry into the causes of things. But the primitive savagism of man is the fulcrum of all his reasonings, and he never once stops to inquire if such were really the case, but goes on as if it had been an undeniable, a well established fact. But this should have been proved and not assumed, as he well knew that an old book called the Bible stated a very different doctrine, and till the authority of that book be clearly invalidated, all his reasonings on this head go for nothing, nay, serve to show more clearly the necessity of divine instruction to the first men, to capacitate them to yield obedience as moral agents, and the propriety and equity of the divine conduct in furnishing the first progenitors of the human race, with a fund of religious and moral knowledge.

Independently of the discoveries of revelation, the origin of the human race and of language is unknown to man: but even on the principles of common sense respecting the authority of human testimony, so far as concerns this fact, the authority of Moses is better than that of Democritus or Epicurus, as he is a far more ancient writer than either of these, being at least a thousand years prior to the former writer. The oldest of the pagan writers is confessedly a modern writer compared to Moses, and their knowledge of past events extended but a very few centuries before their own day, and was chiefly confined to Greece and Italy; and why the authority of such writers should be preferred to the far more ancient and plain and rational narrative of Moses is inexplicable on every principle but that of hostility to revelation, occasioned by the humiliating facts there recorded of the early depravity of man, so revolting to philosophic pride. No savage tribe has of itself become civilized, and any people, who have been once civilized and degenerated in process of time to a state of savagism, have never again emerged from that state to their former condition without foreign aid. No such phenomenon has ever been seen or known. All the elements of literature, science, arts, religion, and laws, which have enlightened Europe, a great part of Asia, and the northern coast of Africa, were so many rays diverging from two points on the banks of the Euphrates and the Nile. Just in proportion as nations receded from these two

points, where humanity and civilization originally beamed, in the same proportion were they more and more immersed in barbarism and ignorance. The early Greeks were rude, ignorant, and uncivilized, till the arrival of the Pelasgi and successive colonies from Egypt and Phœnicia taught them the first elements of learning and science. The aborigines of Italy were in the same state till the arrival of the Pelasgi, the Etruscans, the Umbri, and colonists from Arcadia. Spain was indebted for her incipient civilization to the Phœnician navigators. Whatever of science or of civilized life was known by the Gauls, the Britons, and the Germans, was derived from their Roman conquerors. The same thing may be predicated of every nation in antiquity—that of savage became civilized. In modern times the very same thing has taken, and is still taking place. Those countries which have been discovered by the restless and inquisitive spirit of Europeans have been generally found in the lowest state of savagism, from which, if they have emerged at all, it has been wholly owing to Europeans, and in exact proportion to their connexion with them. There was a time when western Europe itself was thrown back into its former state of barbarous ignorance by the inundation of the Scythian tribes. “Clouds on clouds of barbarians,” says the elegant historian of the Roman empire, “successively rose in the sky, till the congregated host, gathering fresh terror as it rolled along, obscured the sun of Italy, and sunk the western world in night.” Did darkened Europe emerge from its gloom by its own unaided efforts? No. Had not the Greeks, who, in the fifteenth century, took refuge in Italy, brought with them their ancient books, which contained the literature and science of the ancient world, and taught the Italians to read them; we, who are disputing about the savage state and the innate powers of the human mind, had at this day been, comparatively, barbarians ourselves, little accustomed to reason accurately upon such subjects. To this it is, along with the glorious invention of the typographic art, which has multiplied knowledge to an inconceivable extent, that we are indebted for the high station we now occupy in the range of intelligence. The latter is a discovery unknown to the ancients amidst all their progressive improvements, and which we are perfectly sure could never have been invented by savages. That we are now advanced far beyond our masters, the ancients, is undoubtedly true; for the human mind, if once set on the right tract, and excited to advance by awakened curiosity and emulation to excel, together with other stimuli, is capable of making indefinite improvement. But there is a great difference between invention and improvement, between emerging from savagism, and cultivating acquired know-

ledge; or, in other words, between discovering the right tract, and advancing in it when discovered.

It has been observed, by Lord Kaimes, that those who inhabit a rich soil and a genial climate, where the necessities of life are easily procured, are the first to invent the useful and ingenious arts, and to make a figure in intellectual science. This, like many other observations of a similar nature, must depend on facts, not on theory. The Egyptians and Chaldeans were indeed the first nations who figured in history as ingenious and civilized, but it must be remembered that this was not owing merely to the fertility caused by the Nile, or to the rich soil and beautiful sky of Mesopotamia. The original possessors of these countries were the immediate descendants of Noah, and derived their knowledge from him who was contemporaneous with both worlds, and must have possessed the knowledge acquired in the former world. Their stock of knowledge was, therefore, hereditary, not original. Improve it they might, and probably did, but acquire it they did not. But there are many tracts in various parts of the world, whether continental or insular, equally fertile with those of Chaldea and Egypt, whose inhabitants have been savages time out of mind, and continue so still. Let us look to Greece, and see what was the case there. Were the most fertile tracts in that country the first whose inhabitants made a figure in Grecian history as an elegant and refined people? No. The Athenians, who inhabited the most bleak and ungrateful soil in all Greece, surpassed all the other numerous petty states of that country in arts and sciences, in some of which they stand still unrivalled by the moderns. Let us look to the Norwegian colony of Iceland, who settled there at the beginning of the eighth century. These colonists inhabited a bleak and barren soil, a country of perpetual snows, where the climate is ungenial and the sky seldom serene; yet in spite of these external impediments to civilization and comfort, the fine arts were eagerly cultivated there, when all Europe was sunk in ignorance and barbarism. In many other parts of the world, where the soil is not so prolific as to produce indolence on the part of the inhabitants, nor so barren and ungrateful on the other hand as to depress the spirit of the cultivator by poverty and labour, the people continue still in an uncultivated state. From these facts—and they are incontrovertible—it appears, in opposition to lord Kaimes’ observations, that there is no necessary connexion between climate and civilization, and that something besides climate and independent of it is necessary to impel savages towards civilization, and that neither by the external circumstances of soil

and climate on the one hand, nor by their own unaided efforts on the other, have savages ever emerged from barbarism. Nay, on the contrary, the extreme difficulty experienced in every attempt to civilize savages, and the very limited success that has hitherto attended such attempts, and the various plans that have been suggested and adopted to diminish the difficulties attending them, clearly prove the fact of a rooted aversion to civilization in the breasts of savages, and therefore that savages, if left to themselves, would always continue such; and, consequently, that if all mankind had been originally such, they would have remained so. Such facts are totally inconsistent with the doctrine of an innate necessary tendency in the human mind towards improvement, which has been so keenly contended for, by modern philosophers, in opposition to the Mosaic narrative, and completely overthrow it; as an innate tendency to improvement, and a fixed aversion to it, cannot possibly co-exist in the same mind. Such a theory is a mere *lusus imaginationis*, or sport of fancy—a baseless fabric of philosophical vision, conjured up in an idle hour to amuse or astonish the ignorant, and obtain the fame of originality, in opposition to all genuine history, accumulated observation, uniform experience, and the word of God. So far is human nature from pursuing a natural and necessary progress in moral and intellectual improvement, as we are told by that philosophy, that, but for divine merciful interference, human degeneracy would have reached its lowest term, and would there have remained for ever stationary. The numerous and well-attested facts of human deterioration from a state of prior improvement, though sufficient in the view of every candid and well-informed mind to overthrow the illusive theory of infinite perfectibility, make little or no impression on the minds of its advocates. Determined, it would seem, to maintain their darling theory in spite of all facts produced to the contrary, they answer that these are but insulated facts, partial results, that no way affect the truth of the theory—that, notwithstanding these alleged proofs of a contrary tendency, mankind *on the whole* have been always advancing—that every generation has been wiser than the preceding—that the time shall infallibly and necessarily arrive when the lowest of our race shall have the knowledge of a Newton. Instead of such illusive dreams, which flatter and foster the natural pride of man, we find, on looking into past history, that providence has, in pity to our fallen race, at different periods and in different countries, raised up some individuals endowed with superior talents, dignified in pagan lore with the epithets of heroes, demi-gods, or godlike men, who, having themselves acquired some knowledge in nations already civilized, by useful inventions, legislation,

religious instruction, and moral arrangements, sowed the first seeds of improvement among the wandering tribes. Thus we find the Chinese looking to their Fohee, or their Confucius; the Indians to Brahma and Menu; the Burmans to Guadma; the Persians to Zoroaster; the Scandinavians to Odin; the Italians to Saturn, Janus, and Picus; the Peruvians to Manco Capac; and the Mexicans to Vitzliputzli.

The early degeneracy and subsequent barbarism of a great portion of the human race after the dispersion may be easily accounted for in the following manner:—After the deluge, the waste and unpeopled world, except where the immediate descendants of Noah, with their venerable ancestor, settled in the vicinity of Ararat and Shinar, would be soon overspread with forests covered with morasses, and overrun with numberless tribes of animals both tame and wild, herbaceous and carnivorous. The countries at the farthest distance from the plain of Shinar would be the latest in the course of settlement. As all the earliest migrations from the seat of the parent stock took place at a period long anterior to all recorded annals, history must necessarily be silent respecting the dates of these migrations, and the places that were successively colonized. We have nothing to help us on this point but the concise account of Moses, which discusses the subject no farther than it is necessarily connected with the main design of the sacred narrative, namely, the preservation of the true religion and the gradual discoveries of the divine will from Noah down to Abraham, and from the call of that venerable personage, and his separation from his country and kindred, down to the Exodus from Egypt. The colonists, who traversed a large tract of waste and uncultivated country, must have encountered numberless difficulties in the course of their peregrinations—difficulties far exceeding those of modern times. It may justly be said of them that, like Abraham in a similar case, they went they knew not whither. They would have neither chart nor compass to guide them. Utterly destitute, they must necessarily have been, of all knowledge of the surface of the earth, except of that spot where they previously dwelt. Lofty mountain ranges, deep and rapid rivers, and trackless wastes, with swamps and lakes equally unknown and unexpected, must frequently have arrested their course and prolonged their march. Then what further difficulties must they have encountered in an infant settlement. If, in modern times, with all the advantages of accumulated science, previous concert, and felicitous arrangements, the difficulties and dangers of an infant settlement are so great, they must have been vastly more so in the first migrations of the human race. Cut off from all communication with the original settlements of

their more fortunate brethren, and left entirely to their own resources, all their thoughts must have been occupied in procuring such necessary food, and in obtaining such conveniences, however few, as their present situation demanded, and their own labour and invention could supply. Such a state of circumstances would necessarily and unavoidably exclude all concern about such arts and sciences as were unconnected with their necessary pursuits. Hence it is easy to see that most of those colonies that migrated to a very great distance from the land of Shinar, would be necessitated to neglect the practice of those polite but unnecessary modes of civilized life known to their ancestors, and practised before the date of their migration. Ignorance of these would be the necessary and gradual result to their posterity. Certain it is, that those tribes which continued to reside in the vicinity of the centre of civilization always appear in a cultivated state, while, at the same time, the colonists, who removed to a great distance, appear to have sunk into a state of barbarism at a period far anterior to the records of history. Let the map of Asia be examined, and it will there be found that a physical limit, as if made by nature's own hand, is clearly expressed on it, between the abodes of civilization and savagism. Let a line be traced from the western extremity of the province of Yunnan, in China, along the southern frontier of Tibet, as far north-west as the Cimmerian Bosphorus, or straits of Kaffa: this line is a continuous range of the loftiest mountains on the terrestrial surface, and has from immemorial time separated the civilized nations of Asia from the pastoral hordes. Consult the map of Europe, and there trace a similar line from the western extremity of the Euxine Sea, along the Haimus and the winding Alps, to the north-western boundary of Italy: this traced line will in like manner express what formerly constituted the physical boundaries of civilized Europe, till long after the Christian era. All the colonies from Shinar that passed to the north of this line, or rather that roamed to the extremity of Eastern Asia, or to the west as far as the sources of the Rhone or of the Rhine, must necessarily have been cut off by the very nature of such a lofty mountainous barrier from all communication with civilized society, and degenerated consequently into that state of barbarous ignorance in which all the Asiatic tribes are still found to the north of that line. Similar results took place in Africa; for we find that civilization never existed to the south of Mount Atlas, all the descendants of those colonists who passed the great sandy desert in the early migrations, being cut off from all intercourse with their more civilized brethren who dwelt between Mount Atlas and the Mediterranean. This desert has hitherto proved an insuperable barrier to African

civilization, and the only improvements that the African negroes have made in the useful arts have been received from the hands of Mahomedan traders and missionaries. These facts, and they are plain and incontrovertible, easily account for the early degeneracy and consequent savagism of a great portion of the human race, consequent on their early migrations, without having recourse to the original savagism of man, to great physical convulsions, or to the confusion of tongues at Babel. It is well known that all colonizations, with a very few exceptions, (and these can be easily accounted for) have a tendency to deteriorate the human character. America and India supply abundant proof of this. Notwithstanding the constant annual and comparatively easy communication that has always subsisted between America and Europe, by improved nautical science, the character of the Spanish and Portuguese Creoles is still far beneath the standard of their European ancestors; and many of the descendants of the original settlers have degenerated into savagism in various parts of Spanish America and Brazil. The Portuguese who colonized in India, completely degenerated from the character of their ancestors. In our Anglo-American colonies, the van of adventurers in the march of emigration, invariably assimilate to savage life, and lose every habit of settled life. The standard of colonial manners and habits, and the state of science and literature amongst colonists, are so far beneath those of Europe, that colonial society is invariably found to be quite repugnant to men of polished manners and acquired knowledge. Arts and sciences are never found to flourish in colonial settlements as in the parent state. Only such are cultivated, as are immediately connected with the acquisition of gain. If such are the necessary consequences of modern colonization, far worse must have followed the early and distant migrations of the human race. They did not possess the means of improvement, as modern colonists do. The physical boundary, above mentioned, forbade that commercial intercourse with their far-distant and more polished brethren, which might have prevented their degeneracy into barbarism. Secluded from all converse with civilized beings, and wholly occupied in hunting, fishing, and such other means as lay within their reach of supporting existence, they could have no leisure to cultivate their original stock of knowledge, which would consequently soon be lost. If, as in all probability was the case, they carried no written documents with them of religion, science, or art, they would neither have the means, nor inclination, nor leisure to instruct their children. What instructions could be communicated would be merely oral, and confined to a very limited range. In such a state of circumstances, tra-

dition would be the only means left of preserving the remembrance of past facts, which would gradually produce an intermixture of truth and fable, the latter increasing as the former declined, till, in process of time, all remembrance of their primitive ancestors and of their common origin would be lost amidst the clouds of mythos. The habits induced by necessity would become invincible, and savagism, with all its attendant evils, be the necessary and unavoidable result.

It is strange to see those, who would fain be esteemed the wise ones of the earth, so puzzled to account for savagism, and equally so to see them imagining that savages can refine themselves. These men are mere closet philosophers, who never saw savages, nor knew any thing about them but what they learned by reading. It is very easy for idle speculative men, residing in the very midst of civilization, and enjoying all its attendant comforts, such as a convenient chamber, a comfortable fire, a good library, and the conversation of their philosophical friends, as they love to denigrate them, to talk about savagism, and the slow and insensible progress which men make from that state, till (like them) they become philosophers, and, like them, contrive some theory to show the world that they are men of original thinking. If such philosophers would issue forth from their closets, abandon the abodes and the comforts of civilized life, and dwell amongst savages, and watch them with the eye of patient and accurate investigation, like those benevolent and indefatigable missionaries, who have sacrificed all the comforts of civilized life, to refine, enlighten, and humanize savages, it would be doing something to purpose, and, we are certain, would soon annihilate those idle dreams with which they have pestered the world from time to time. They would soon see what a difficult thing it is to reclaim a savage, and to render him a civilized and thinking being. We see the Turks, who have lived for 800 years in the very confines of civilization, still retaining all their pristine Scythian habits. All attempts that have been made to enlighten them, have utterly failed, and some of their Sultans have perished in the attempt. So far as can be judged from past experience, their case seems hopeless. Instead of becoming civilized, they have banished civilization from those abodes where once it flourished in an eminent degree, and the only alternative apparently left, is either to exterminate them as incorrigible barbarians, who cannot teach and will not learn, or drive them back to the pristine abodes of their savage ancestors. In the vast and overgrown empire of Russia, it is but lately that the barbarous nations who inhabited it have been reduced to some degree of civilization and order,

by the astonishing perseverance of Peter the Great; and had the strelitzes of Russia been as powerful and as successful in their endeavours to prevent the execution of his projects as the janissaries have been in Turkey, the case of Russia would have been equally hopeless. Even with all the successive efforts of succeeding sovereigns, its inhabitants in many parts are still savages, and the middling and lower classes of Russian population still discover an invincible aversion to learning, and to every thing that exalts and humanizes man. Erudition is still held in the utmost contempt. No gentleman is ever taught Greek or Latin, and were a Russian stranger in company to give the smallest hint of his possessing such knowledge, every man with a sword at his side would draw away his chair, and set him down for a charity boy. One of the most accomplished scholars of the age, after having made himself extremely agreeable in a company of ladies by his taste in music, was instantly deserted by them upon its being whispered by some person present, that he was a man of learning, and he was compelled to pretend that he was a lieutenant-colonel, totally illiterate, before the ladies would be reconciled to him. For proof that the Russians are still barbarous, the reader is referred to Dr. Clarke's *Travels*, and Mr. Lyall's account of Russian manners. These facts are completely at variance with the theory that man makes a natural and necessary progress from savagism to civilization.

It is curious to see the striking conformity between the modern doctrine of original savagism, and that of a primitive chaos, in the system of modern world-makers. As in the one case man rose naturally and necessarily from the ignorant, brutal, and uninstructed savage to his present exalted state, in virtue of his innate powers; so in the other, the earth rose in a similar manner, in virtue of established and immutable laws, from the *rudis indigestaque moles* to its present beautiful and diversified form. In both theories, a long succession of indefinite periods intervened before man became rational and civilized, or the earth assumed its present form. In both theories, Divine agency is excluded, and every thing done by natural agency. In both theories, the existence of what are denominated the laws of Nature are always supposed, and we consequently never arrive, nor indeed can, at a time when these laws were not, earth and man becoming what they are by laws peculiar to their respective natures. In both theories, numerous universal catastrophes have befallen the globe, altering the whole aspect of physical nature and the moral and intellectual condition of man. This curious and striking agreement of both theories affords strong presumptive evidence that both are wrong, and that they are nothing but the fruit

of philosophy and vain deceit. How transcendently superior is the Mosaic narrative of the creation, clear, sublime, concise, and consistent throughout. As by a series of successive Omnipotent acts, God made a perfect world, so he also by a final omnipotent act, made a *perfect man*. We are there told that as in creating the world the Omnipotent, by these incomprehensible acts, anticipated those sensible effects which are now produced by gradual processes of which he then established the laws, so he acted in a similar manner when creating man. He did not merely create him in the full possession of his bodily organs and mental powers, and then leave him to shift for himself in the best manner he could. He did not thrust him out into the world like a large overgrown infant—a great child, with sensible organs and animal appetites that could fit him only for a brutal life. He did more. He did what was absolutely necessary in the case of a being who had none to instruct him. He taught him how to use his powers—communicated knowledge to him—conversed with him—made a helpmate for him—placed him under a mild law, and gave him a conditional promise of continued immortality. When fallen from his primitive state, he was not consigned to hopeless despair—he was not left to live without God in the world, and to degenerate into savage ignorance. He who made him had mercy on him—inspired hope into him, by the gracious promise of a future Deliverer—and increased this hope by successive discoveries of that eternal purpose, which he purposed in Christ Jesus before the world began, to his fallen descendants, in such measure and at such times as He, in his infinite wisdom, saw best adapted to their circumstances. This statement is clear, consistent, and cheering, compared with the infidel theory of original savagism. We have but to state the Mosaic account of the creation, in opposition to the doctrine of a chaotic geogony, which originated in the dreams of pagan cosmogonists, and its sublime simplicity will immediately appear.—“In the beginning, the Omnipotent created the heaven and the earth. But the earth was *invisible and unfurnished*, and *darkness* was upon the face of the *abyss*. Therefore the breath of the Omnipotent went forth upon the face of the waters (*abyss*); and the Omnipotent said, *Be light, and light was*.”—Let us hear the wisdom of pagan philosophy, as sung by Aristophanes in his comedy of the Birds, and cited by

Cudworth in his Intellectual System, p. 121 fol. —

First all was chaos, one confused heap,
Darkness enwrapt the disagreeing deep;
In a mix'd crowd the elements jumbled were,
Nor earth, nor air, nor heaven did appear;
Till on this horrid vast abyss of things,
Teeming Night, spreading her coal-black wings,
Laid the first egg, whence, after time's due course,
Issued forth Love, (the world's prolific source)
Glistening with golden wings, which, fluttering o'er
Dark Chaos, gendered all the numerous store
Of animals and gods.—

Let us next hear the Mantuan bard in his Eclogues, Eclog. vi. l. 31.

Namque canibal uti magnum perineque coacta
Semina terrarumque, animaque, marique fuissent,
Et liquidi simul, ignis, ut his exordia primis
Omnia, et ipse tener mundi concreverit orbis;
Tum durare solum, et discludere Nereæ Ponto
Ceperit, et rerum paulatim sumere formas.

He sang the *molecules* of Nature's frame,
Of air, of earth, of sea, of liquid flame;
How congregated wide in space, they all
Grew from these elements to this fair ball;
How the moist soil, *condensing by degrees*,
Press'd from the hard'ning mass the exuded seas,
Till earth at last her perfect form assumed.—

If any shall still prefer the doctrine of chaotic cosmogonies and original savagism, to the sublime and concise account of the inspired record, we can only deplore their taste and pity their judgment. In the meantime, let us be grateful that we are Christians and not Pagans—that we have a surer word of prophecy to guide us than the dim light of uninstructed reason;—let us rejoice that our race has ever been under providential and benevolent care—that we enjoy the light of revelation and the light of science, neither of which we could have enjoyed on the opposite theory, had it been true;—let us contemplate the Divine goodness in the creation of our race, and in those subsequent blessings which that goodness has conferred upon it; and exclaim, with pious gratitude, in the language of the devout Psalmist: “When I consider *Thy* heavens, the work of *Thy* fingers, the moon and the stars which *Thou* hast ordained; What is *man*, that *Thou* art *mindful of him*, or the *son of man*, that *Thou* visitest him? *Thou* madest him but a little lower than the angels; *Thou* hast crowned him with glory and honour; *Thou* hast made him to have *Dominion* over the works of *Thy* hands; *Thou* hast put all things in subjection under his feet.”—Ed.

INTRODUCTION

On the benefit of Arts and Sciences to Mankind. Their origin to be attributed to God.

THE history of arts and sciences, and of the persons who have most eminently distinguished themselves by them, to speak properly, is the history of the powers of the human mind, which in some sense does not give place to that of princes and heroes, whom common opinion places in the highest degree of elevation and glory. I do not intend, by speaking in this manner, to strike at the difference of rank and condition, nor to confound or level the order which God himself has instituted amongst men. He has placed princes, kings, and rulers of states over our heads, with whom he has deposited his authority; and after them generals of armies, ministers, magistrates, and all those with whom the sovereign divides the cares of government. The honours paid them, and the pre-eminence they possess, are no usurpation on their side. It is the divine providence itself that has assigned them their high stations, and demands submission, obedience, and respect for those that sit in its place.

But there is also another order of things, and, if I may be permitted to say so, another disposition of the same providence, which, without regard to the first kind of greatness I have mentioned, establishes a quite different species of eminence, in which distinction arises neither from birth, riches, authority, nor elevation of place, but from merit and knowledge alone. It is the same providence that regulates rank also of this kind, by the free and entirely voluntary dispensation of the talents of the mind, which it distributes in what proportion, and to whom it pleases, without any regard to quality and nobility of person. It forms, from the assemblage of the learned of all kinds, a new species of empire, infinitely more extensive than all others, which takes in all ages and nations, without regard to age, sex, condition, or climate. Here the plebeian finds himself upon the level with the nobleman, the subject with the prince, nay, often his superior.

The principal law and most legitimate proof of deserving solid praises in this empire of litera-

ture, is, that every member of it be contented with his own place; that he be void of all envy for the glory of others; that he looks upon them as his colleagues, destined, as well as himself, by providence, to enrich society, and become its benefactors; and that he remembers with gratitude from whom he holds his talents, and for what ends they have been conferred upon him. For, indeed, how can those, who distinguish themselves most amongst the learned, believe, that they have that extent of memory, facility of comprehending, industry to invent and make discoveries; that beauty, vivacity, and penetration of mind from themselves? and if they possess all these advantages from something exterior, how can they assume any vanity from them? But can they believe they may use them at their own pleasure, and seek in the application they make of them only their own glory and reputation? As providence places kings upon their thrones solely for the good of their people, it distributes also the different talents of the mind solely for the benefit of the public. But in the same manner as we sometimes see in states, usurpers and tyrants, who, to exalt themselves alone, oppress all others, there may also arise amongst the learned, if I may be allowed to say so, a kind of tyranny of the mind, which consists in regarding the successes of others with an evil eye, in being offended at their reputation, in lessening their merit, in esteeming only one's self, and in affecting to reign alone,—a hateful defect, and very dishonourable to learning. The solid glory of the empire of learning in the present question, I cannot repeat it too often, is not to labour for one's self, but for mankind; and this, I am so bold to say, is what places it exceedingly above all the other empires of the world.

The victories which take up the greatest part of history, and attract admiration the most, have generally no other effects but the desolation of countries, the destruction of cities, and the slaughter of men. Those so much boasted heroes of antiquity, have they made a single man the

better? Have they made many men happy? And if by the founding of states and empires they have procured posterity some advantage, how dearly have they made their cotemporaries pay for it, by the rivers of blood they have shed? Those very advantages are confined to certain places, and have a certain duration. What benefit do we, at this day, derive from either Nimrod, Cyrus, or Alexander? All those great names, all those victories which have astonished mankind from time to time—those princes and conquerors, with all their magnificence and vast designs, are returned into nothing with regard to us; they are dispersed like vapours, and are vanished like phantoms.

But the inventors of arts and sciences have laboured for all ages of the world. We still enjoy the fruits of their application and industry. They have provided, at a great distance, for all our occasions. They have procured for us all the conveniences of life. They have converted all nature to our uses. They have reduced the most indocile matter to our service. They have taught us to extract from the bowels of the earth, and even from the deeps of the sea, the most precious riches; and what is infinitely more estimable, they have opened to us the treasures of all the sciences; and have guided us to knowledge the most sublime, the most useful, and the most worthy of our nature. They have put into our hands, and placed before our eyes, whatever is most proper to adorn the mind, to direct our manners, and to form good citizens, good magistrates, and good princes.

These are part of the benefits we have received from those who have invented, and brought arts and sciences to perfection. The better to know their value, let us transport ourselves in imagination back to the infancy of the world, and those gross ages, when man, condemned to eat his bread by the sweat of his brow, was without aids and instruments, and obliged, however, to cultivate the earth, that he might extract nourishment from it; to erect himself huts and roofs for his security; to provide clothing for his defence against the frosts and rains; and, in a word, to find out the means to satisfy all the necessities of life. What labours, what difficulties, what disquiets! All which are spared us.

We do not sufficiently consider the obligations we are under to those equally industrious and laborious men, who made the first essays in arts, and applied themselves in those useful but elaborate researches. That we are commodiously housed, that we are clothed, that we have cities, walls, habitations, temples; to their industry and labour we are indebted for them all. It is by their aid our hands cultivate the fields, build houses, make stuffs and habits, work in brass and iron; and to make a transition from the useful to the agreeable, that we use the pencil,

handle the chisel and graver, and touch instruments of music. These are solid and permanent advantages and emoluments, which have always been increasing from their origin; which extend to all ages and nations, and to all mankind in particular, which will perpetuate themselves throughout all times, and continue to the end of the world. Have all the conquerors together done any thing that can be imagined parallel with such services? All our admiration, however, turns generally on the side of these heroes in blood, whilst we scarce take notice of what we owe to the inventors of arts.

But we must go farther back, and render the just homage of praise and acknowledgment to him, who alone has been, and was capable of being, their author. This is a truth confessed by the Pagans themselves; and Cicero attests most expressly, that men have all the conveniences of life from God alone: *Omnes mortales sic habent, externas commoditates a diis se habere.*¹

Pliny, the naturalist, explains himself still in a stronger manner, where he speaks of the wonderful effects of simples and herbs in regard to distempers; and the same principle may be applied to a thousand other effects which seem more astonishing than those. "It is," says he, "to understand very ill the gifts of the Divinity, and to repay them with ingratitude, to believe them capable of being invented by man. It is true, chance seems to have given birth to these discoveries; but that chance is God himself; by which name, as well as by that of nature, we are to understand him alone, who is the great parent of all things." In effect, how little soever we reflect upon the relation and proportion which appears, for instance, between the works of gold, silver, iron, brass, lead, and the rude mass as it lies hid in the earth, of which they are formed; between linen cloth, whether fine and thin, or coarse and strong, and flax and hemp; between stuffs of all sorts, and the fleece of sheep; between the glossy beauty of wrought silks, and the deformity of an hideous insect: we ought to assure ourselves, that man, abandoned to his own faculties, could never have been able to make such happy discoveries. It is true, as Pliny has observed, that chance has seemed to give birth to most inventions; but who does not see, that God, to put our gratitude to trial, takes pleasure to conceal himself under those fortuitous events, as under so many veils, through which our reason, when ever so little

¹ Lib. 3. De nat. deor. n. 86.

² *Quæ si quis ullo fortè ab homine excogitari potuisse credit, ingratis decorum munera intelligit.—Quod certè casu repertum quis dubitet? His ergo casus, hic est ille, qui plurima in vita inventit Deus. Hoc habet nomen, per quem intelligitur eadem, et parens rerum omnium et magistra natura.—Plin.*

enlightened by faith, traces with ease the beneficent hand which confers so many gifts upon us?

The divine providence shows itself no less in many modern discoveries, which now appear to us exceedingly easy, yet nevertheless escaped, during all preceding ages, the knowledge and inquiries of the many persons always intent upon the study and perfection of arts, till it pleased God to open their eyes, and to show them what they did not see before. In this number may be reckoned both wind and water mills, so commodious for the uses of life, which however are not very ancient. The ancients engraved upon copper: whence was it that they never reflected, that by impressing upon paper what they had engraved, they might write that in a moment which they had been so long in cutting with a tool? It is, notwithstanding, only about three hundred years¹ since the art of printing books has been discovered. The same may be said of gunpowder, of which our ancient conquerors were in great want, and which would have very much abridged the length of their sieges. The compass, that is to say, the needle touched with the loadstone, suspended upon an axis, is of such wonderful use, that to it alone we stand indebted for the knowledge of the new world, and by its means all the people of the earth are united by commerce. How came it that mankind, who knew all the other properties of the loadstone, were so long without discovering one of such great importance?

We may conclude in the same manner, I think, in regard to the incredible difficulty of some discoveries, which do not offer themselves by any outward appearances, and yet are almost as old as the world, and the extreme facility of other inventions, which seem to guide us to them, and yet have not been discovered till after many ages, that both the one and the other are absolutely disposed by the direction of a superior Being, who governs the universe with infinite wisdom and power. We are indeed ignorant of the reasons which have induced God to observe a different conduct in the manifestation of these mysteries of nature, at least in a great measure; but that conduct is, however, no less to be revered. What he suffers us sometimes to see of it, ought to instruct us in respect to all the rest.

Christopher Columbus conceives the design to go in search of new worlds. He addresses himself for that end to several princes, who look upon his enterprise as madness, and it seemed such in effect. But he had within him, with regard to this enterprise, an inherent impulse, and ardent and continual desire, which rendered him passionate, restless, and invincible to all obstacles and remonstrances. Who was it that inspired him with this bold design, and gave him such inflexible constancy, but God alone, who had resolved from all eternity to enlighten the people of that new world with the lights of the gospel. The invention of the compass was the occasion of it. Providence had assigned a precise time for this great event. The moment could neither be advanced nor retarded. Hence it was that this discovery had been so long deferred, and was afterwards so suddenly and so courageously executed.

After these observations, which I thought useful to many of my readers, I shall proceed to my subject. I shall divide all that relates to the arts and sciences into three books. In the first I shall treat of agriculture, commerce, architecture, sculpture, painting, and music. In the second I shall treat of the art-military, and what regards the raising and maintaining troops, battles, and sieges, both by sea and land. In the last book, with which my work will conclude, I shall run over the arts and sciences that have most relation to the mind,—grammar, poetry, history, rhetoric, and philosophy, with all the branches that either depend on, or have any relation to them.

I must observe beforehand, with the same freedom I have professed hitherto, that I undertake to treat a subject of which many parts are almost entirely unknown to me. For this reason I shall have occasion for new indulgence. I demand permission therefore to make use freely, as I have always done (and am now reduced to do more than ever), of all the helps I shall meet with in my way. I shall hazard losing the glory of being an author and inventor: but I willingly renounce it, provided I have that of pleasing my readers, and of being any way useful to them. Profound erudition must not be expected here, though the subject seems to imply it. I do not pretend to instruct the learned; my aim is to make choice of that from all the arts which may best suit the capacities of the generality of readers.

¹ It is now (1896) nearly an hundred years more since our Author wrote.

THE
HISTORY
OF THE
ARTS AND SCIENCES
OF THE ANCIENTS.

CHAP. I.
OF AGRICULTURE.

ARTICLE I.

Antiquity of Agriculture. Its utility. The esteem it was in amongst the ancients. How important it is to place it in honour, and how dangerous to neglect the application to it.

I MAY with justice place agriculture at the head of the arts, which has certainly the advantage of all others, as well with regard to its antiquity as utility. It may be said to be as ancient as the world, having taken birth in the terrestrial paradise itself, when Adam, newly come forth from the hands of his Creator, still possessed the precious but frail treasure of his innocence; God having placed him in the garden of delights, commanded him to cultivate it; *ut operaretur illum: to dress and keep it*, Gen. ii. 15. That culture was not painful and laborious, but easy and agreeable; it was to serve him for amusement, and to make him contemplate in the productions of the earth the wisdom and liberality of his Master.

The sin of Adam having overthrown this order, and drawn upon him the mournful decree, which condemned him to eat his bread by the sweat of his brow; God changed his delight into chastisement, and subjected him to hard labour and toil, which he had never known had he continued ignorant of evil. The earth, become stubborn and rebellious to his orders, to punish his revolt against God, brought forth thorns and thistles. Violent means were necessary to

compel it to pay man the tribute, of which his ingratitude had rendered him unworthy, and to force it, by labour, to supply him every year with the nourishment, which before was given him freely and without trouble.

From hence therefore we are to trace the origin of agriculture, which from the punishment it was at first, is become, by the singular goodness of God, in a manner the mother and nurse of the human race. It is, in effect, the source of solid wealth and treasures of a real value, which do not depend upon the opinion of men—which suffice at once to necessity and enjoyment, by which a nation is in no want of its neighbours, and often necessary to them—which make the principal revenue of a state, and supply the defect of all others, when they happen to fail. Though mines of gold and silver should be exhausted, and the monies made of them lost—though pearls and diamonds should remain hid in the womb of the earth and sea—though commerce with strangers should be prohibited—though all arts, which have no other object than embellishment and splendour, should be abolished, the fertility of the earth alone would afford an abundant supply for the occasions of the public, and furnish subsistence both for the people and armies to defend it. We ought not to be surprised, therefore, that agriculture was in so much honour amongst the ancients; it ought rather to seem wonderful that it ever should cease to be so, and that of all professions the most necessary and most indispensable should have fallen into so great contempt. We

have seen in the whole course of our history, that the principal attention of the wisest princes, and the most able ministers, was to support and encourage husbandry.

Amongst the Assyrians and Persians the Satrapæ were rewarded, in whose governments the lands were well cultivated, and those punished who neglected that part of their duty. Numa Pompilius, one of the wisest kings antiquity mentions, and who best understood and discharged the duties of the sovereignty, divided the whole territory of Rome into different cantons.¹ An exact account was rendered him of the manner in which they were cultivated, and he caused the husbandmen to come before him, that he might praise and encourage those whose lands were well manured, and reproach others with their want of industry. The riches of the earth, says the historian, were looked upon as the justest and most legitimate of all riches, and much preferred to the advantages obtained by war, which are of no long duration. Ancus Martius, the fourth king of the Romans, who piqued himself upon treading in the steps of Numa, next to the adoration of the gods, and reverence for religion, recommended nothing so much to the people, as the cultivation of lands and the breeding of cattle.² The Romans long retained this disposition, and in the latter times, whoever did not discharge his duty well, drew upon himself the animadversion of the censor.³

It is known from never-failing experience, that the culture of lands, and the breeding of cattle, which is a consequence and necessary part of it, has always been a certain and inexhaustible source of wealth and abundance. Agriculture was in no part of the world in higher consideration than in Egypt, where it was the particular object of government and policy; and no country was ever better peopled, richer, or more powerful. The strength of a state is not to be computed by extent of country, but by the number of its citizens, and the utility of their labour.

It is hard to conceive, how so small a tract as the land of Promise should be able to contain and nourish an almost innumerable multitude of inhabitants: this was from the whole country's being cultivated with extreme application.

What history relates of the opulence of several cities in Sicily, and in particular of the immense riches of Syracuse, of the magnificence of its buildings, of the powerful fleets it fitted out, and the numerous armies it had on foot, would appear incredible, if not attested by all the ancient authors. From whence can we believe, that

Sicily could raise wherewith to support such enormous expenses, if not from the produce of their lands, which were improved with wonderful industry? We may judge of their application to the culture of land, from the care taken by one of the most powerful kings of Syracuse, (Hiero II.) to compose a book upon that subject, in which he gave wise advice and excellent rules, for supporting and augmenting the fertility of the country.

Besides Hiero, other princes are mentioned,⁴ who did not think it unworthy their birth and rank, to leave posterity precepts upon agriculture, so sensible were they of its utility and value: of this number were Attalus, surnamed Philometor, king of Pergamus, and Archelaus of Cappadocia. I am less surprised that Plato, Xenophon, Aristotle, and other philosophers, who have treated politics in particular, have not omitted this article, which makes an essential part of that subject. But who would expect to see a Carthaginian general amongst these authors? I mean Mago. He must have treated this matter with great extent, as his work, which was found at the taking of Carthage, consisted of twenty-eight volumes. So high a value was set on it, that the senate ordered it to be translated, and one of the principal magistrates took upon himself the care of doing it.⁵ Cassius Dionysius of Utica had before translated them out of the Punic language into Greek.⁶ Cato, the censor, had however published his books upon the same subject. For Rome was not then entirely depraved, and the taste for the ancient simplicity still continued in a certain degree. She remembered with joy and admiration, that in ancient times her senators lived almost continually in the country; that they cultivated their lands with their own hands, without ever indulging rapacious and unjust desires for those of other men; and that consuls and dictators were often taken from the plough.⁷ In those happy times, says Pliny,⁸ the earth, glorious in seeing herself cultivated by the hands of triumphant victors, seemed to make new efforts, and to produce her fruits with greater abundance; that is, no doubt, because

4 De cultura agri præcipere principale fuit, etiam apud exteros.—*Plin.* l. xviii. c. 3.

5 D. Syllanus. 6 Varr. de Re Rust. l. i. c. 1.

7 Antiquitus abaratro arcescebantur ut consules fierent.—Attilum sua manu spargentem semem qui missi erant convenerunt.—Suos agros studiosè colebant, non alienos cupidè appetebant.—*Cic. pro Rosc. Amer.* n. 50.

8 Quæ nam ergo tantæ ubertatis causa erat? Ipsorum tunc manibus Imperatorum colebantur agri (ut fas est credere) gaudente terra vomere laureato, et triumphali aratore: sive illi eadem curâ semina tractabant, quâ bella, eademque diligentia arva disponebant, quâ castra: sive honestis manibus omnia læticia proveniunt, quoniam et curiosius fiunt.—*Plin.* l. xviii. c. 3.

1 Dion. Halicarn. Antiq. Rom. l. ii. p. 135.

2 Id. l. iii. p. 177.

3 Agrum male colere Censorium probrum adjudicabatur.—*Plin.* l. xviii. c. 3.

those great men, equally capable of handling the plough and their arms, of sowing and conquering lands, applied themselves with more attention to their labour, and were of course more successful in it. And indeed, when a person of condition, with a superior genius, applies himself to arts, experience shows us, that he does it with greater ability, force of mind, industry, taste, and with more inventions, new discoveries, and various experiments; whereas an ordinary man confines himself servilely within the common road, and to his ancient customs. Nothing opens his eyes—nothing raises him above his old habits; and after many years of labour, he continues still the same, without making any progress in the profession he follows.

Those great men I have mentioned, had never undertaken to write upon agriculture, if they had not been sensible of its importance, which most of them had personally experienced. We know what a taste Cato had for rural life, and with what application he employed himself in it. The example of an ancient Roman, whose farm adjoined his, was of infinite service to him. (This was Manius Curius Dentatus, who had thrice received the honour of triumph.) Cato often went to walk in it, and considering the small extent of that land, the poverty and simplicity of the house, he was struck with admiration for that illustrious person, who, when he became the greatest of the Romans, having conquered the most warlike nations, and driven Pyrrhus out of Italy, cultivated this little land with his own hands, and after so many triumphs, inhabited so wretched a house.⁹ It is here, said he to himself, that the ambassadors of the Samnites found him by his fire side, boiling roots, and received this wise answer from him, after having offered him a great sum of money: That gold was a thing of small value to one who could be satisfied with such a dinner; and that for his part, he thought it more glorious to conquer those who had that gold, than to possess it himself.¹⁰ Full of these thoughts, Cato returned home, and making an estimate of his house, lands, slaves, and expenses, he applied himself to husbandry with more ardour, and retrenched all needless superfluity. Though very young at that time, he was the admiration of all that knew him. Valerius Flaccus, one of the most noble and most powerful persons of Rome, had

lands contiguous to Cato's small farm. He there often heard his slaves speak of his neighbour's manner of living, and of his labour in the field. He was told, that in the morning he used to go to the small cities in the neighbourhood, to plead and defend the causes of those who applied to him for that purpose. That from thence he returned into the field, where throwing a mean coat over his shoulders in winter, and almost naked in summer, he worked with his servants, and after they had done, he sat down with them at table, and ate the same bread, and drank the same wine.¹¹

We see by these examples how far the ancient Romans carried the love of simplicity, poverty, and labour. I read with singular pleasure the tart and sensible reproaches which a Roman senator makes to the augur Appius Claudius, upon the magnificence of his country-houses, by comparing them to the farm where they then were. "Here (said he) we see neither painting, statues, carving, nor mosaic work; but to make us amends, we have all that is necessary to the cultivation of lands, the dressing of vines, and the feeding of cattle. In your house every thing shines with gold, silver, and marble; but there is no sign of arable lands or vineyards. We find there neither ox, nor cow, nor sheep. There is neither hay in cocks, vintage in the cellars, nor harvest in the barn. Can this be called a farm? In what does it resemble that of your grandfather, and great-grandfather?"¹²

After luxury was introduced to this height amongst the Romans, the lands were far from being cultivated, or producing revenues as in ancient days. At a time when they were in the hands of slaves or abject mercenaries, what could be expected from such workmen, who were forced to their labour only by ill treatment?¹³ This was one of the great, and most imprudent neglects, remarked by all the writers upon this subject in the latter times; because to cultivate lands properly, it is necessary to take pleasure and be delighted with the work, and for that end to find it for one's interest and gain to follow it.

It is therefore highly important, that the whole land of a kingdom should be employed to the best advantage, which is much more useful

9 Hunc, et incomptis Curium capillis
Utilem bello tulit et Camillum
Sæva paupertas, et avitus apto
Cum lare fundus.

10 Curio ad focum sedenti magnum auri pondus Samnites cum attulissent repudiati ab eo sunt. Non enim aurum habere præclarum sibi videri dixit, sed his qui haberent aurum imperare. Cicero makes Cato himself speak thus, in his book upon old age, n. 55.

11 This puts me in mind of a fine saying of Pliny the younger, who gave his freedmen the same wine he drank himself. When some body represented that this must be very chargeable to him: No, said he; my freedmen do not drink the same wine I drink, but I the same they do. Quia scilicet liberti mei non idem quod ego bibunt, sed idem ego quod liberti.—*Plin.* l. ii. Epist. 6.

12 Var. l. iii. c. 2.

13 Nunc eadem illa (arva) vineti pedes, damnatæ ruanus, inscripti vultus ex coeli.—Nos miramur ergastulorum non eadem emolumenta esse, quæ fuerint Imperatorum.—*Plin.* l. xviii. c. 3.

than to extend its limits; in order to this, each master of a family, residing in the small towns and villages, should have some portion of land appropriated to himself; whence it would follow, that this field, by being his own, would be dearer to him than all others, and be cultivated with application; that his family would think such employment their interest, attach themselves to their farm, subsist upon it, and by that means be kept within the country. When the country people are not in their own estates, and are only employed for hire, they are very negligent in their labour, and even work with regret. A lord and landholder ought to desire that their lands and estates should continue a long time in the same family, and that their farmers should succeed in them from father to son; from whence a quite different regard for them would arise: and what conduced to the interest of particulars, would also promote the general good of the state.¹ But when an husbandman or farmer has acquired some wealth by their industry and application, which is much to be desired by the landlord for his own advantage, it is not by this gain, says Cicero, the rents laid on them are to be measured, but by the lands themselves, they turn so much to their account; the produce of which ought to be equitably estimated and examined into, for ascertaining what new imposition of rents they will bear.² For to rackrent and oppress those who have applied themselves well to their business, only because they have done so, is to punish, and indeed to abolish, industry; whereas, in all well regulated states, it has always been thought necessary to animate it by emulation and reward.

One reason of the small produce of the lands, is, because agriculture is not looked upon as an art that requires study, reflections, and rules: every one abandons himself to his own taste and method, whilst nobody thinks of making a serious scrutiny into them, of trying experiments, and of uniting precepts with experience.³ The ancients did not think in this manner.⁴ They judged three things necessary to success in agriculture. *The will*: this employment should be loved, desired, and delighted in, and followed in consequence out of pleasure. *The power*: it is requisite to be in a condition

to make the necessary expenses for the breeding and fattening of cattle and fowl of all sorts, for labour, and for whatever is necessary to the manuring and improving of lands; and this is what most of our husbandmen want. *The skill*: it is necessary to have studied maturely all that relates to the cultivation of lands, without which the two first things are not only ineffectual, but occasion great losses to the master of a family, who has the affliction to see, that the produce of the land is far from answering the expenses he has been at, or the hopes he has conceived from them; because those expenses have been laid out without discretion, and without knowledge in the application of them. To these three heads a fourth may be added, which the ancients had not forgot, that is, *experience*, which presides in all arts, is infinitely above precepts, and makes even the faults we have committed our advantage: for, from doing wrong we often learn to do right.⁵

Agriculture was in quite different esteem with the ancients, to what it is with us: which is evident from the multitude and quality of the writers upon this subject. Varro cites to the number of fifty amongst the Greeks only. He wrote upon it also himself, and Columella after him. The three Latin authors, Cato, Varro, and Columella, enter into a wonderful detail upon all the parts of agriculture. Would it be an ungrateful and barren employment to compare their opinions and reflections with the modern practice?

Columella,⁶ who lived in the time of Tiberius, deplores, in a very warm and eloquent manner, the general contempt, into which agriculture was fallen in his time, and the persuasion men were under, that to succeed in it, there was no occasion for a master. "I see at Rome," said he, "the schools of philosophers, rhetoricians, geometricians, musicians, and what is more astonishing, of people solely employed, some in preparing dishes proper to whet the appetite, and excite gluttony; and others to adorn the head with artificial curls, but not one for agriculture. However, the rest might be well spared; and the republic flourished long without any of those frivolous arts; but it is not possible to want that of husbandry, because life depends upon it."⁷ Besides, is there a more honest or legal means

1 Lucium Volasium asseverantem audiui, patris familias felicissimum fundum esse, qui colonos indigenas haberet, et tanquam in paterna possessione notos, jam inde a cunabulis longa familiaritate retineret.—Colum. l. i. c. 7.

2 Cum Aratori aliquid onus imponitur, non omnes, si quæ sunt præterea, facultates, sed arationis ipsius vis ac ratio consideranda est, quid ea sustinere, quid pati, quid efficere possit ac debeat.—Cic. *Verr. de frum.* n. 109.

3 Debenus et imitari alios, et aliter ut faciamus eandem experientia tentare. *Varro.* l. i. c. 18.

4 Colum. l. i. c. 1.

5 Usus et experientia dominantur in artibus, neque est ulla disciplina in qua non peccando discatur. Nam ubi quid perperam administratum cesserit improspere, vitatur quod scellerat, illuminaturque rectam viam docentis magisterium. *Colum.* ibid.

6 Colum. in præm. l. i.

7 Sine ludicris artibus—olim satis felices futuræque sunt urbes: at sine agricultoribus nec consistere mortales, nec ali posse manifestum est.

of preserving, or increasing, a patrimony? Is the profession of arms of this kind, and the acquisition of spoils always dyed with human blood, and amassed by the ruin of an infinity of persons? Or is commerce so, which, tearing citizens away from their native country, exposes them to the fury of the winds and seas, and drags them into unknown worlds in pursuit of riches? Or is the trade of money and usury more laudable, odious and fatal as they are, even to those they seem to relieve? Can any one compare any of these methods with wise and innocent agriculture, which only the depravity of our manners can render contemptible, and by a necessary consequence, almost barren and useless? Many people imagine, that the sterility of our lands, which are much less fertile now than in times past, proceeds from the intemperance of the air, the inclemency of seasons, or from the alteration of the lands themselves; that weakened and exhausted by long and continual labour, are no longer capable of producing their fruits with the same vigour and abundance. This is a mistake," says Columella: "we ought not to imagine, that the earth, to whom the author of nature has communicated a perpetual fecundity, is liable to barrenness as to a kind of disease. After its having received from its master a divine and immortal youth, which has occasioned its being called the common mother of all things, because it always has brought forth, and ever will bring forth from its womb, whatever subsists, it is not to be feared, that it will fall into decay and old age like man. It is neither to the badness of the air, nor to length of time, that the barrenness of our lands is to be imputed; but solely to our own fault and neglect: we should blame only ourselves, who abandon those estates to our slaves, which in the days of our ancestors, were cultivated by the most noble and illustrious."

This reflection of Columella seems very solid, and is confirmed by experience. The land of Canaan (and as much may be said of other countries) was very fertile, at the time the people of God took possession of it, and had been seven hundred years inhabited by the Canaanites. From thence to the Babylonish captivity was almost a thousand years. In the latter days, there is no mention of its being exhausted, or worn out by time, without speaking of the after ages. If, therefore, it has been almost entirely barren during a long course of years, as is said, we ought to conclude with Columella, that it is not from its being exhausted or grown old; but because it is deserted and neglected.⁸ And we ought also to conclude,

that the fertility of some countries, of which so much is said in history, arises from the particular attention of the inhabitants in tilling the land, in cultivating the vines, and breeding of cattle: of which it is time to say something.

ARTICLE II.

Of tillage. Countries famous amongst the ancients for abounding with corn.

I shall confine myself, in speaking of tillage, to what relates to wheat, as the most important part of that subject.

The countries most famous for abounding in corn were Thrace, Sardinia, Sicily, Egypt, and Africa.¹⁰ Athens brought every year from Byzantium four hundred thousand *medimni* of wheat, as Demosthenes informs us.¹¹ The *medimnus* contained six bushels, and was sold in his time for no more than five drachmas, that is to say, for fifty pence French. How many other cities and countries did Thrace furnish with corn, and how fertile must it consequently have been? It is not without reason that Cato the censor, whose gravity of manners occasioned him to be surnamed *the Wise*, called Sicily the magazine and nursing mother of the Roman people.¹² And indeed, it was from thence Rome brought almost all her corn, both for the use of the city, and the subsistence of her armies. We see also in Livy, that Sardinia supplied the Romans with abundance of corn.

All the world knows how much the land of Egypt, watered and enriched by the Nile, which served it instead¹³ of the husbandman, abounded with corn.¹⁴ When Augustus had reduced it into a Roman province, he took particular care of the bed and canals of this beneficent river, which by degrees had been much clogged with mud, through the neglect of the kings of Egypt, and caused them to be cleansed by the Roman troops, whom he left there. From thence came regularly every year, twenty millions of bushels of wheat. Without this supply, the capital of the world was in danger of perishing by famine. She saw herself in this condition under Augustus, for there remained only three days' provision of corn in the city. That prince, who was full of tender-

diderunt, nec senio, sed nostra scilicet inertia minus benignè nobis arva respondent. *Colum.* l. ii. c. 2.

10 Demosth. in orat. cont. Lept. p. 546.

11 Id. in Phorm. p. 346.

12 Ille M. Cato Sapiens cellam penariam resp. nostram, nutriticem plebis Romanæ Siciliam nominavit—Itaque ad omnes res Sicilia provincia semper usi sumus; ut, quicquid ex se posset afferre id non apud eos nasci sed domi nostræ conditum putaremus. *Cic. Verr.* c. 3. n. 5.

13 Nilus ibi coloni vice fungitur. *Plin.*

14 Sext. Aurel. vict. in epito.

⁸ An feneratio probabilior sit etiam his invisæ quibus succurrere videtur.

⁹ Non igitur falligatione, quemadmodum plurimi cre-

ness for the people, had resolved to poison himself, if the expected fleets did not arrive before the expiration of that time. They came, and the preservation of the people was attributed to the good fortune of the prince. We shall see, that wise precautions were afterwards taken, to avoid the like danger for the future.

Africa did not give place to Egypt in point of fertility.¹ In one of its countries, one bushel of wheat sown has been observed to produce an hundred and fifty. From a single grain, almost four hundred ears would sometimes spring up, as we find by letters to Augustus and Nero, from those who governed Africa under them. This was no doubt very uncommon. But the same Pliny, who relates these facts, assures us, that in Boeotia and Egypt it was a very common thing for a grain to produce an hundred and fifty ears: and he observes, upon this occasion, the attention of the divine providence, which hath ordained, that of all plants that which it had appointed for the nourishment of man, and in consequence the most necessary, should be also the most fruitful.

I have said, that Rome at first brought almost all her corn from Sicily and Sardinia. In process of time, when she had made herself mistress of Carthage and Alexandria, Africa and Egypt became her storehouses. Those cities sent numerous fleets every year, freighted with wheat for the use of the Roman people, then lords of the universe. And when the harvest happened to fail in one of these provinces, the other came in to its aid, and supported the capital of the world. Corn, by this means, was at a very low price at Rome, and sometimes sold for no more than two *asses*, or pence, a bushel.² The whole coast of Africa abounded exceedingly with corn, in which part of the wealth of Carthage consisted.³ The city of Leptis only, situated in the lesser Syrtis, paid a daily tribute to it of a talent, that is to say, of three thousand livres. In the war against Philip, the Carthaginian ambassadors supplied the Romans with a million of bushels of corn, and five hundred thousand of barley. Those of Massinissa gave them also as much.⁴

Constantinople was supplied in the same manner, when the seat of empire was transplanted thither. An admirable order was observed in both these cities, for subsisting the immense number of people that inhabited them. The emperor Constantine caused almost four-score thousand bushels of corn, which came from Alexandria, to be distributed daily at Constantinople;⁵ this was for the subsistence of

six hundred and forty thousand men, the Roman bushel serving only eight men. When the emperor Septimus Severus died, there was corn in the public magazines for seven years, expending daily seventy-five thousand bushels, that is to say, bread for six hundred thousand men.⁶ What a provision was this against the dearth of any future years!

Besides these I have mentioned, there were many other countries very fruitful in corn. For the sowing of an acre only one *medimnus* of corn was required: *medimnum*.⁷ The *medimnus* consisted of six bushels, each of which contained very near twenty pound weight of corn. (It is observed, in the *Spectacle de la Nature*, that the usual and sufficient quantity for sowing an acre, is an hundred and twenty pound of corn: which comes to the same amount.) The highest produce of an acre was ten *medimni* of corn, that is to say, ten for one; but the ordinary produce was eight, with which the husbandmen were well satisfied. It is from Cicero we have this account; and he must have known the subject very well, as he uses it in the cause of the Sicilians against Verres. He speaks of the country of the Leontines, which was one of the most fruitful in Sicily.⁸ The highest price of a bushel of corn amounted to three sesterces, or seven pence halfpenny. It was less than that of France by almost one fourth. Our septier contains twelve bushels, and is often sold for ten livres. By that estimate our bushel is worth sixteen pence, and something more; that is to say, twice the price of the bushel of the ancients, and something more. All that Cicero relates upon the subject of corn, as to its price, how much of it was necessary for sowing an acre, and what quantity it produced being sown, ought not to be considered as an established rule; for these would vary considerably according to soils, countries, and times.

The ancients had different methods of thrashing their corn.⁹ They made use, for that purpose, either of sledges armed with points, or of horses, which they made trample upon it, or of flails, with which they beat the sheaves, as is now customary in many places. They also used various methods for preserving corn a great while, especially by shutting it up close in the ear in subterranean caverns, which they covered on all sides with straw, to defend it against damps; closing the entrance with great care, to prevent the air from getting in. Varro assures us, that corn would keep good in that manner for fifty years.¹⁰

1 Plin. l. xviii. c. 8.

2 Liv. l. xxxi. n. 50.

3 Id. l. 35. n. 62.

4 Id. l. xliii. n. 6.

5 Socrat. l. ii. c. 13.

6 Elian. Spartan. in Sever.

7 Cic. in Verr. de frum. n. 112. Plin. l. xviii. c. 7.

8 Cic. ibid. n. 173. 9 Plin. l. xviii. lib. c. 30.

10 Lib. i. de Re Rust. c. 5.

ARTICLE III.

SECT. 1.

Cultivation of the vine. Wines celebrated in Greece and Italy.

We may believe, that mankind have been no less industrious in the cultivation of the vine, than in that of corn, though they applied themselves to it later. The scripture informs us, that the use of wine was not known till after the deluge. "Noah began to be an husbandman, and he planted a vineyard," Gen. ix. 20. It was, no doubt, known before, but only in the grape, and not as liquor. Noah planted it methodically, and discovered the use that might be made of the fruit, by pressing out and preserving the liquor. He was deceived by its sweetness and strength, which he had not experienced: "And he drank of the wine and was drunken." The Pagans transferred the honour of the invention of wine to Bacchus, of which they never had much knowledge; and what is said of Noah's drunkenness, made them consider Bacchus as the god of drunkenness and debauch.

The offspring of Noah, having dispersed into the several countries of the world, carried the vine with them from place to place, and taught the use to be made of it. Asia was the first to experience the sweets of this gift, and soon imparted it to Europe and Africa. We see in Homer,¹¹ that in the time of the Trojan war, part of the commerce consisted in the freight of wines. The wine was kept in those days in large earthen jars, or in the skins of beasts, which custom continues to this day in countries where wood is not plenty. It is believed that we are indebted to the Gauls, that settled on the banks of the Po, for the useful invention of preserving our wine in vessels of wood exactly closed, and for retaining it within bounds, notwithstanding its fermentation and strength. From that time the keeping and transporting it became more easy, than when it was kept in earthen vessels, which were liable to be broke, or in bags of skin, apt to unsew or grow mouldy.

Homer mentions a very famous wine of Maronea in Thrace, which would bear mixing with twenty times as much water.¹² But it was common for the natives to drink it unmixed. Nor have authors¹³ been silent upon the excessive

brutalities to which that nation were subject. Pliny¹⁴ tells us that Mucianus,¹⁵ who had been thrice consul, being in that country in his own time, had experienced the truth of what Homer says, and saw that in a certain measure of wine they put fourscore times as much water; which is four times as much as the Grecian poet speaks of. The same author¹⁶ mentions wines much celebrated in Italy, which took their name from Opimius, in whose consulate they were made, which were preserved to his time, that is, almost two hundred years, and were not to be purchased for money. A very small quantity of this, mingled with other wines, communicated to them, as was pretended, a very surprising strength and exquisite flavour. How great soever the reputation of the wines made in the consulate of Opimius might be, or in that of Anicius, for the latter were much cried up, Cicero set no such great value upon them; and above an hundred years before Pliny writes, he found them too old to be supportable.¹⁷

Greece and Italy, which were distinguished in so many other respects, were particularly so, by the excellency of their wines. In Greece, besides many others, the wines of Cyprus, Lesbos, and Chio, were much celebrated. Those of Cyprus are in great esteem to this day. Horace often mentions those of Lesbos, and represents them as very wholesome and agreeable.¹⁸ But Chio carried it from all the other countries, and eclipsed their reputation so much, that the inhabitants of that island were thought to be the first who planted the vine, and taught the use of it to other nations.¹⁹ All these wines were in so great esteem, and of so high a price, that at Rome, so late as to the infancy of Lucullus, in their entertainments they drank only one cup of them at the end of the feast.²⁰ Their prevailing qualities were sweetness, and a delicious flavour.

Pliny was convinced that the libations of milk instituted by Romulus,²¹ and Numa's prohibition to honour the dead by pouring wine

14 Plin. l. xiv. c. 4.

15 This was the celebrated Mucianus, who had so much share in the election of Vespasian to the empire.

16 Plin. l. xiv. c. 4.

17 Atqui eae notæ sunt optimæ credo: sed nimia vastas nec habet eam, quam quæsimus, suavitatem, nec est sænè jam tolerabilia.—Cic. in Brut. l. 287.

18 Hic innocentis pocula Lesbii
Duces sub umbra.—Od. vii. l. 1.

Beneath the shade you here may dine,
And quaff the harmless Lesbian wine.

19 Athen. l. i. pp. 26, 32.

20 Tanta vino Græco gratia erat, ut singulæ potiones in convivio darentur.—L. Lucullus puer apud patrem nunquam lautum convivium vidit, in quo plus semel Græcum vinum daretur.—Plin. ex Varro. l. xiv. c. 14.

21 Plin. l. xiv. c. 12.

11 Illad. l. vii.

12 Odyss. l. ix. v. 197.

13 Natis in usum lætitiæ scyphis
Pugnare Thracum est.—Hor. Od. xxvii. l. 1.

With bowls for mirth and joy design'd
To fight betwixt the Thracian blind.

upon the funeral pile, were proofs that in those days vines were very scarce in Italy. They increased considerably in the following ages; and it is very probable that for this the Romans were obliged to the Greeks, whose vines were in high repute, as they were in process of time also, for their taste for arts and sciences. It was the wines of Italy, in the time of Camillus, that brought the Gauls again thither.¹ The charms of that liquor, which was entirely new to them, were powerful attractions to induce them to quit their country.

Two-thirds of all the places famed for the goodness of wine were in Italy. The ancient custom of that country, which it still retains, was to fasten their vines to trees,² and especially to the poplar, to the tops of which they projected their slender circling branches: this had a very fine effect, and was a most agreeable object to the eye. In several places they made use of props, as we do. The country of Capua alone supplied them with the Massick, Calenian, Formian, Cæcuban, and Falernian, so much celebrated by Horace.³ It must be allowed, that the goodness of the soil, and the happy situation of all those places, contributed very much to the excellency of these wines; but we must also admit, that they owed it more to the care and industry of the husbandmen, who applied themselves with their utmost attention to the cultivation of the vines. The proof of which is, that in Pliny's time,⁴ which was about an hundred years after Horace, the repu-

tation of these wines, formerly so famous, was entirely come to nothing, through the negligence and ignorance of the vine-dressers, who, blinded by the hope of gain, were more intent upon having a great quantity, than good wine.

Pliny cites several examples of the extreme difference which cultivation will produce in the same land.⁵ Amongst others, he tell us of a celebrated grammarian, who lived in the reign of Tiberius and Claudius, and purchased a vineyard at a small price, which had long been neglected by its ancient masters. The extraordinary care he took of it, and the peculiar manner in which he cultivated it, occasioned a change in a few years, that seemed little less than a prodigy *ad vix credibile miraculum perduxit*. So wonderful a success, in the midst of other vineyards, which were almost always barren, drew upon him the envy of all his neighbours, who, to cover their own sloth and ignorance, accused him of magic and sorcery.

Amongst the wines of Campania, which I have mentioned, the Falernian was in great vogue.⁶ It was very strong and rough, and was not deemed sufficiently improved for use till it had been kept ten years. To soften that roughness, and qualify its austerity, they made use of honey, or mingled it with Chio, and by that mixture made it excellent. This ought, in my opinion, to be ascribed to the refined and delicate taste of those voluptuous Romans, who, in the latter times, spared nothing to exalt the pleasures of the table, by whatever was most agreeable, and most capable of gratifying the senses. There were other Falernian wines more temperate and soft, but not so much esteemed.

The ancients, who so well knew the excellency of wine, were not ignorant of the dangers attending too free an use of it.⁷ I need not mention the law of Zaleucus, by which the Epizephyrian Locrians were universally forbid the use of wine upon pain of death, except in case of sickness. The inhabitants of Marseilles and Melitus showed more moderation and indulgence, and contented themselves with prohibiting it to women. At Rome,⁸ in the early ages, young persons of liberal condition were not permitted to drink wine till the age of thirty; but as for the women, the use of it was absolutely forbid to them; and the reason of that prohibition was, because intemperance of that kind might induce them to commit the most excessive crimes. Seneca complains bitterly that this custom was

1 *Eam gentem (Gallorum) traditur fama, dulcedine frugum, maximeque vini nova tum voluptate captam, Alpes transisse.—Liv. l. v. n. 33.*

2 In Campano agro vitas populus nubunt, maritosque complexæ atque per ramos earum procacibus brachiis geniculato cursu scandentes, cacumina sequant.—*Plin. l. xvi. c. 1.*

3 From this custom three elegant expressions in Horace take birth, all derived from the same metaphor. He says, *he marries the trees to the vines.* *Epod. 2.*

*Ergo aut adulta vitum propagine
Altas maritat populos.*

He calls the same trees, *widowers*, when the vines are no longer fastened to them. *Od. v. l. iv.* Aut vitum viduas ducit ad arbores. And gives the name of *bachelors* to the trees which never had the vine annexed to them: *Platanusque celebs evinctet ulmos.—Od. 15. l. ii.*

4 *Cæcubum, et prælo domitam Caleno
Tu bibes uvam: mea nec Falerni
Temperant vitæ, neque Formiani
Pocula colles.—Od. 90. l. i.*

*Cæcubus and Calenum join
To fill thy bowls with richest wine:
My humble cups do not produce
The Formian or Falernian juice.*

5 *Quod jam interdicti incuria coloni.—Cura, culturae id contigerat. Exolevit hoc quoque culpa (Vinitorum) copiae potius quam bonitatis studentium.—Plin. l. xiv. c. 6.*

6 *Lib. xiv. c. 3.*

7 *Athen. l. i. p. 26.*

8 *Ib. l. x. p. 429.*

9 *Vini usus olim Romanis feminis ignotus fuit, ne scilicet in aliquod dedecus proleberentur: quia proxima a libero patre intemperantiae gradus ad inconcessam venærem esse consuevit.—Fal. Mas. l. i. c. 1.*

almost universally violated in his times. The weak and delicate complexion of the women, says he, is not changed; but their manners are changed, and no longer the same.¹⁰ They value themselves upon carrying excess of wine to as great an height as the most robust men. Like them they pass whole nights at table, and with a full glass of unmixed wine in their hands, they glory in vying with them, and, if they can, in overcoming them.

The emperor Domitian passed an edict in relation to wine, which seemed to have a just foundation.¹¹ One year having produced abundance of wine, and very little corn, he believed they had more occasion for the one than the other, and therefore decreed that no more vines should be planted in Italy; and that in the provinces, at least one half of the vines should be rooted up. Philostratus expresses himself, as if the decree ordained that they should all be pulled up, at least in Asia; because, says he, the seditions which arose in the cities of that province, were attributed to wine.¹² All Asia deputed Scapellianus, a professor of eloquence at Smyrna, to go to Rome upon that occasion. He succeeded so well in his remonstrances, that he obtained not only that vines should continue to be cultivated, but that those who neglected to do so should be laid under a fine. It is believed that Domitian was chiefly induced to abolish his edict by the dispersing of papers with two Greek verses in them, signifying, that let him do what he would, there would still remain wine enough for the sacrifice, in which an emperor should be the offering.¹³ It seems, however, says Mr. Tillemont, that his edict subsisted throughout the greatest part of the west to the reign of Probus; that is almost two hundred years. That emperor, who after many wars had established a solid peace in the empire, employed the troops in many different works, useful to the public; to prevent their growing enervate through sloth, and that the soldier might not eat his pay without deserving it. So that as Hannibal had formerly planted the whole country of Africa with olive trees, lest his soldiers, for want of something to do, should form seditions; Probus, in like manner, employed his troops in planting vines upon the hills of Gaul, Pannonia, Mesia, and in many other countries. He permitted in general the Gauls, Pannonians, and Spaniards, to have as many vines as they thought fit; whereas, from the time of Domitian, that permission had not been granted to any nation of the world.

Produce of the vines in Italy in Columella's time.

Before I conclude this article upon vines, I cannot omit extracting a passage of Columella, which explains what profit was made from them in his time. He enters for this purpose into a detail which seems sufficiently curious to me, and makes an exact calculation of the expense and produce of a vineyard of seven acres. His design is to prove, that the cultivation of vines is more beneficial than any other kind of husbandry, not excepting that of corn itself. That might be true in his times, but it is not so in ours, at least in the general opinion. This difference arises, perhaps, from the various accidents to which the vine is subject in France; frosts, rains, blights, which are not so much to be apprehended in hot countries. To these may be added the high price of casks in plentiful years, which swallows up the greatest part of the vine-dresser's profit, and the customs, which very much diminish (to the grower) the price of wines. Even amongst the ancients, all were not of Columella's opinion. Cato indeed gave vines the first rank, but those only which produced the most excellent liquor, and in great abundance.¹⁴ With the same conditions we still think in the same manner. Many gave the preference to pasture lands; and their principal reason was, that the charges in the culture of vines were almost equal to their produce.

I.—*The charges necessary for seven acres of vines.*¹⁵

	liores.
1. For the purchase of a slave, whose labour sufficed for the cultivation of seven acres of vines, eight thousand sestertii,	1000

14. Cato quidem dicit [primum agrum esse] ubi vineæ possunt esse bono vino et multo.—Alii dant primum bonis pratis.—Vineam sunt qui putent sumptu fructum devorare.—*Farr. de Re Rustic.* l. i. c. 7, 8.

15 It must be observed that this table is faulty in the reduction of the Roman monies to French value. It is much more correctly given (as Letronne, Rollin's late Editor, observes), in the *Treatise on the Belles Lettres*, tom. iv. p. 167, where it stands thus:—

8000 sestertii, =	1636 livres Francois, =	£68 3 4
7000 do. =	1431 do. do. =	59 12 6
14,000 do. =	2862 do. do. =	119 5 0
3480 do. =	711 do. do. =	29 12 6
32,480	= 6640	= £276 13 4

A Roman sestertius was reckoned to have been worth one penny 15-16ths of our money; a denarius, which contained four of these, was, consequently, worth sevenpence three farthings; and 1000 sestertii, £8 : 1s : 5d. according to Arithnot's tables. But some later writers, who pretend to more accuracy in such calculations, make

¹⁰ Non minus, pervigilant, non minus potant; et mero viros provocant.

¹¹ Sueton. in Domit. c. 7.

¹² Philost. vit. Apollon. l. vi. c. 7.

¹³ Sueton. in Domitian. c. 14.

2. For a field of seven acres, seven thousand sestertii,	875
3. For the props and other necessary expenses for seven acres, fourteen thousand sestertii,	1750
These three sums added together amount to twenty-nine thousand sestertii,	3625
4. For the interest of the aforesaid sum of twenty-nine thousand sestertii for two years, during which the land does not bear, and the money lies dead, three thousand four hundred and fourscore sestertii,	486
The total of the expense amounts to thirty-two thousand, four hundred and eighty sestertii,	4060

II.—Produce of seven acres of vines.

The yearly produce of seven acres of vines, is six thousand three hundred sesterces; that is, seven hundred fourscore and seven livres, ten sols. Of which what follows is the proof.

The *Culeus* is a measure which contains

the denarius eightpence of our money, and the sestertius twopence; at this rate, 1000 sestertii are equal in value to L3. 6s. 8d. Assuming twopence as the value of the Roman sestertius, the expense of planting a vineyard of seven jugera, or Roman acres, reduced to British money, will stand thus:—

Price of a slave for dressing seven jugera of vines,	8000 sestertii, L66 13 4
Do. of a field of seven jugera,	7000 do. 58 6 8
Do. do. props and other necessary expenses,	14,000 do. 117 13 4
Interest of 29,000 sestertii for two years, during which the land does not bear, and the money lies dead,	3480 do. 29 0 0
Total expense amounting to 32,480 do.	L271 13 4
Interest of the above total at 6 per cent.	1950 sestertii, L16 5 0
Produce of seven jugera of vines.	
The annual produce of the above,	6300 sestertii, L52 10 0
Interest deducted from the value of the produce,	1950 do. 16 5 0
Clear produce,	4350 do. L36 5 0

The seven jugera required for a vineyard by Columella, are equivalent to 3.437 acres Scotch, and 4.326 acres English. Each jugerum of vines produced, says Columella, three culei of wine. Now the culeus, according to the tables of Artusnot, was equal to 143 gallons three and a half pints, English wine measure. Therefore the produce of each jugerum was equal to 430 gallons two and one-half pints English. The aggregate produce of the whole field, therefore, was twenty-one culei, or 3012 gallons one and a half pint English, or eleven tuns, one butt, sixteen gallons and half a pint, English wine measure. Each culeus was worth at the vineyard 300 sestertii, or L2. 10s. The produce of each jugerum was worth 900 sestertii, or L7. 10s. English money, and the aggregate produce, therefore,

twenty *amphora*, or forty *urna*. The *amphora* contains twenty-six quarts, and somewhat more. The *Culeus*, in consequence, contains five hundred and twenty quarts, which make two hogsheads of the Paris measure, wanting fifty-six quarts. The lowest value of the *Culeus* is three hundred sestertii; that is to say, thirty-seven livres, ten sols. The least produce of each acre was three *Culei*, which were worth nine hundred sestertii, or an hundred and twelve livres, ten sols. The seven acres therefore produced a profit of six thousand three hundred sestertii, which make seven hundred fourscore and seven livres, ten sols. The interest of the total expense, which is thirty-two thousand four hundred and fourscore sestertii, that is, four thousand and sixty livres; this interest, I say, at six per cent. per annum, amounts to one thousand nine hundred and forty-four sestertii, and something more, or two hundred and forty-three livres. The interest of the sum arising from the annual produce of a vineyard of seven acres, is, six thousand three hundred sestertii; that is, seven hundred fourscore and seven livres, ten

1 Columella observes, that each acre of Seneca's vineyards produced eight *Culei*.—Lib. iii. c. 3. And Varro, that in many places an acre produced from ten to fifteen, l. i. c. 2.

6,300 sestertii, or L52. 10s. English money. Therefore, the clear produce of seven jugera of vines was L36. 5s. or thirteen and a half per cent., after deducting the interest of stock. Besides the above profit on the produce of the vines, Columella adds that arising from the layers or shoots, called *vini radices* by the Romans. He says that 70,000 of these were produced in a vineyard of seven jugera, and that they sold for 21,000 sestertii, or L175 sterling. By adding this sum to 6,300 sestertii, or L52. 10s. the profit arising from the produce of the wine, he makes it 27,300 sestertii, or L227. 10s. upon a vineyard of seven jugera, being upwards of 80 per cent. Not content with this, he assures us, that the number of layers is taken at the lowest, for that his own vineyards produced annually double that amount, so that they must have afforded him more than 200 per cent. annual produce, supposing them to have produced as much wine as those of Seneca and others. It appears from Columella, Varro, and Pliny, that the produce of vineyards varied exceedingly, from one culeus, to 7, 10, and 15 culei per jugerum.

It must not be supposed, however, that the above produce was all clear profit, for in the calculations given there is no allowance made for the maintenance of the slave and his master, nor for the tear and wear of the necessary implements, &c. Such comparative statements of the profit and expenses of undertakings are commonly very fallacious, and in nothing more so than in agriculture. The very fact that Columella's statements were disputed, proves that the profit was not generally so great as he represented it to be. The love of gain is a universal stimulant among all civilized nations, and had the fact been as he states it, every Italian farmer who had it in his power, would have turned a cultivator of vines. But it is equally clear, that in such a case, the supply would have

pence. From whence may be seen how much the latter interest exceeds the former, which was, however, the common interest of money. This is what Columella would prove.

Besides this produce, Columella reckons another profit arising from layers. The layer is a young shoot¹ or branch of a vine, which is set in the earth, where it takes root in order for propagation of the plant. Each acre produced yearly ten thousand of these layers at least, which sold for three thousand sestertii, or three hundred and seventy-five livres. The layers produced therefore from the seven acres, twenty-one thousand sestertii, or two thousand six hundred and twenty livres. Columella computes the produce of these layers at the lowest value; for as to himself he assures us, his own vineyards produced regularly twice as much. He speaks only of the vines of Italy, and not of those of other provinces.

Adding the produce of the wine to that of the plants or layers, the profit upon seven acres of vines amounted to three thousand four hundred livres. The produce of these layers, unknown

to our vine-dressers, proceeded, no doubt, from the vine's being very rare in a great number of provinces; and the reputation of the vines of Italy having spread universally, people came from all parts to buy those layers, and to enable themselves, by their means, to plant good vineyards in places which had none before, or which had only such as were indifferent.

ARTICLE IV.

Of the breeding of cattle.

I have said that the breeding of cattle is a part of agriculture. It certainly is an essential part of it, not only because cattle, from the abundance of their dung, supply the earth with the manure, which is necessary to the preservation and renovation of its vigour, but because they share with man in the labours of husbandry, and spare him the greatest part of the toil. Hence it was that the ox, the laborious companion of man in tilling the ground, was so highly regarded by the ancients, that whoever had killed one of

2 Vini radices.

soon exceeded the demand, and consequently a proportionate fall in price would have taken place, and ruined the speculators in wine. Unless a monopoly therefore had been granted to the proprietors of old vineyards, prohibiting the cultivation of new ones, such enormous profits, as Columella states, could not possibly have lasted long. The growing luxury of the Romans would undoubtedly increase the demand for wine, till a sufficiency was raised for home consumption; and not only was the home market to be supplied with the juice of the grape, but likewise the provinces of Gaul, Spain, and Britain, and until the vine was transplanted to these regions by the Roman settlers and governors. The exportation of Italian wines, therefore, would, for a considerable period, be great; and the very circumstance of the transplantation of vines to these extensive provinces would cause a large demand for layers; and so long as this exportation of wines and layers continued, the profits of vineyards would be great. But as soon as the vine was found to succeed in these provinces, and a sufficiency was raised for their own consumption, the demand for Italian wines and vines would cease, and their sale would be chiefly, if not altogether, confined to the home market. The price of wine and layers would of course fall, and the great profits derived for a period from the cultivation of the vine would cease to be enjoyed. So early as the reign of Vespasian, French wines were imported into Italy, and competed in the Italian markets with the wines of Italy. The increasing competition narrowed the profit, and what was lost by growing competition, the cultivators and wine merchants endeavoured to compensate by deteriorating the article, till the Italian wines no longer preserved their wonted celebrity. Respecting the edict of Domitian, it was, we think, very stupid and unnecessary. The ostensible cause of it was the scarcity of corn, and the superabundance of wine. But the excessive cultivation of vines was an evil which, by overstocking the market, lowering the price of the article, and ultimately ruining the speculators, could not fail of soon curing itself. As

soon as one occupation ceases to yield profit, men naturally betake themselves to another which will pay. If wine was cheap because superabundant, corn would be dear because it was scarce; therefore corn would pay much better than vines, and the cultivation of the one would take the place of the other. The cultivators of vines need corn for subsistence, as well as any other class of men; and therefore a demand for corn is as much promoted by the cultivation of vines, as by any other species of industry. Neither Pliny, Varro, nor Columella, supposed that the scarcity of corn was owing to the cultivation of vineyards. Corn is nowhere more carefully cultivated than in the wine provinces of France, where the land is fit for producing it, as in Burgundy, Guienne, and the Upper Languedoc. The numerous hands employed in the one species of cultivation, necessarily encourages the other. "To diminish," says Dr. Smith, "the number of those paying for it, is surely a most unpromising expedient for promoting the cultivation of corn. It is like the policy that would promote agriculture by discouraging manufactures." The opinion of Tillemont, that the edict of Domitian continued in full force for 200 years in the western provinces, I am inclined to consider erroneous. The Gauls were as fond of wine as the Asiatics, and as impatient under the restraint. I am rather of opinion, that Probus introduced the vine where it was not before, on the hills of Germany, Pannonia, and Moesia. It is hardly possible to believe, that whilst the Asiatics, Greeks, and Africans, were allowed to plant as many vines, and drink as much wine, as they pleased, the Italians were wholly prohibited from planting vines, and the Gauls, Britons, and Spaniards, restricted to one half of their vine cultivation. Can we imagine it at all probable that the Italians, who had been accustomed to cultivate the generous vine as the favourite produce of their genial climate for more than 700 years, would have endured such an edict to remain in full force against themselves for 200 years? I cannot believe it but upon the strongest evidence; and the whole evidence is that of Eutropius and Vopiscus, which is certainly not comparable to that of Suetonius and Philostratus, who positively affirm that the edict was repealed.—*Ed.*

them was punished with death, as if he had killed a citizen; no doubt, because he was esteemed a kind of murderer of the human race, whose nourishment and life stood in absolute need of the aid of this animal.¹

The farther we look back into antiquity, the more we are assured, that in all nations the breeding of cattle produced considerable revenues.² Without speaking of Abraham, whose numerous family of domestics shows the multitude of his flocks and herds, or of his kinsman Laban, the holy scripture observes, Job i. 3. that the greatest part of Job's riches consisted in cattle; and that he possessed seven thousand sheep, three thousand camels, five hundred yoke of oxen, and five hundred she-asses. It was by this land of promise, though of very moderate extent, enriched its princes, and the inhabitants of the country, whose numbers were incredible, amounting to more than three millions of souls, including women and children. We read that Ahab, king of Israel, 2 Kings iii. 4. imposed an annual tribute upon the Moabites, whom he had conquered, of an hundred thousand sheep. How much must this number have multiplied in a short time, and what abundance occasioned throughout the whole country.

The holy scripture, in representing Uzziah, 2 Chron. xxvi. 10. as a prince accomplished for every part of a wise government, does not fail to inform us, that he had a great number of husbandmen and vineyards, and that he fed abundance of cattle. He caused great enclosures to be made in the countries, and vast houses for fothering the flocks and herds, with lodges fortified with towers, for the shepherds to retire to with their flocks, and to secure them against irruptions. He also took care to have great numbers of cisterns cut for watering the flocks; works not so splendid, but no less estimable than the most superb palaces. It was, without doubt, the particular protection, which he gave to all who were employed in the cultivation of lands, or the breeding of cattle, that rendered his reign one of the most opulent Judea had ever seen. And he did thus, saith the scripture, "because he loved husbandry:" *Erat enim homo agricultura deditus*. The text is still stronger in the Hebrew: *QUIA DILIGEBAT TERRAM*, "because he loved the ground." He took delight in it, perhaps cultivated it with his own hands; at least, he made husbandry honourable, he knew all the value of it, and was sensible that the earth, manured with diligence and skill, was an assured

source of riches both to the prince and people; he therefore thought attention to husbandry one of the principal duties of the sovereignty, though often the most neglected.

The scripture says also of the holy king Hezekiah, 2 Chron. xxxii. 29. "Moreover he provided him cities and possessions of flocks and herds in abundance, for God had given him substance very much." It is easy to conceive, that the shearing of sheep alone, without mentioning other advantages from them, could not but produce a very considerable revenue in a country where an almost innumerable multitude were continually fed. And hence we find, that the time for shearing of sheep was a season of festivity and rejoicing.

Amongst the ancient pagans the riches of the kings consisted in cattle, as we find from Latinus in Virgil, and Ulysses in Homer. It was the same amongst the Romans, who by the ancient laws did not pay fines in money, but in oxen and sheep.

We must not be surprised, after having considered the great advantages produced by the breeding and feeding of cattle, that so wise a man as Varro has not disdained to give us an extensive account of all the beasts that are of any use to the country, either for tillage, breed, or for carriage, and the other conveniences of man. He speaks first of small cattle, sheep, goats, and hogs: *greges*. He proceeds next to the large beasts, oxen, asses, horses, and camels: *armenta*. And concludes with fowl, which may be called domestic animals, *villatica pecudes*; pigeons, turtle-doves, fowls, geese, and many others. Columella enters into the same detail;³ and Cato the censor runs over part of it. The latter, upon being asked what was the surest and shortest method to enrich a country, replied, the feeding of cattle, which is attended with an infinity of advantages to those who apply themselves to it with diligence and industry. And, indeed, the beasts that labour in the field render mankind continual and important services; and the advantages he reaps from them do not conclude even with their lives. They divide with him, or rather spare him the most laborious part of the work, without which the earth, however fruitful in itself, would continue barren, and not produce him any increase. They serve him in bringing home with safety into his house the riches he has amassed without doors, and carry him on his journeys. Many of them cover his table with milk, cheese, wholesome food, and even the most exquisite dishes; and supply him with the rich materials of the stuffs he is in want of for clothing himself, and with a thousand other conveniences of life.

¹ Bos laboriosissimus hominis socius agricultura cujus tanta fuit apud antiquos veneratio, ut tam capitale esset bovem necesse quam civem.—Colum. in præf. l. vi.

² In rusticatione vel antiquissima est ratio pascendi, eademque et questuosissima.—Ibid.

³ Columel. præf. l. vi.

We see, from what has been said hitherto, that the country, covered with corn, wine, flocks, and herds, is a real Peru to man, and a much more valuable and estimable one than that from whence he extracts gold and silver, which, without the other, would not preserve him from perishing with hunger, thirst, and cold. Placed in the midst of a fertile territory, he beholds around him at one view all his riches; and without quitting his little empire, he finds immense and innocent treasures within his reach. These he regards, no doubt, as gifts from the liberal hand of that supreme Master to whom he is indebted for all things; but he regards them also as the fruits of his own labour, and that renders them still more grateful to him.

SECT. V.

Innocency and pleasure of a rural life, and of Agriculture.

The revenues and profits which arise from the culture of lands, is neither the sole nor the greatest advantage accruing from it. All the authors who have wrote upon rural life,⁴ have always spoken of it with the highest praises, as of a wise and happy state, which inclines a man to justice, temperance, sobriety, sincerity, and, in a word, to every virtue; which in a manner shelters him from all passions, by keeping him within the limits of his duty, and of a daily employment, that leaves him little leisure for vices. Luxury, avarice, injustice, violence, and ambition, the almost inseparable companions of riches, take up their ordinary residence in great cities, which supply them with the means and occasions: the hard and laborious life of the country does not admit of these vices. This gave room for the poets to feign that Astræa, the goddess of justice, had her last residence there, before she entirely quitted the earth.

We see in Cato the form of a prayer used by the country people, wherein may be discerned the precious tokens of the ancient tradition of men, who attributed every thing to God, and addressed themselves to him in all their temporal necessities, because they knew he presided over all things, and that all things depended on him. I shall repeat a good part of it, and hope it will not be unacceptable. It is in a ceremony called

Solitaurelia, and according to some *Suocetaurelia*, in which the country people made a procession round their lands, and offered libations and sacrifices to certain gods.

"Father Mars," said the suppliant, "I humbly implore and conjure you, to be propitious and favourable to me, my family, and all my domestics, in regard to the occasion of the present procession in my fields, lands, and estate; to prevent, avert, and remove from us all diseases, known and unknown, desolations, storms, calamities, and pestilential air; to make our plants, corn, vines, and trees, grow and come to perfection; to preserve our shepherds and flocks; to grant thy preservation of life and health to me, my family, and all my domestics." What a reproach is it that Christians, and often those who have the greatest share in the goods of this world, should in these days be so little careful to demand them from God, and be ashamed to thank him for them! Amongst the pagans all their meals began and ended with prayers, which are now banished from almost all our tables.

Columella enters into a detail upon the duties of the master or farmer,⁵ in regard to his domestics, which seems full of reason and humanity. "Care ought to be taken," says he, "that they are well clad, but without finery; that they are defended against the wind, cold, and rain. In directing them,⁶ a medium should be observed between too great indulgence and excessive rigour, in order to make them rather fear than experience severities and chastisements; and they should be prevented from doing amiss by diligence, and their master's presence; for good conduct consists in preventing, instead of punishing, faults. When they are sick, care should be taken that they are well tended, and that they want for nothing; which is the certain means to make their business grateful to them."⁷ He recommends also the same usage of slaves, who often worked laden with chains, and who were generally treated with great rigour.

What he says with regard to the mistress of a country family is very remarkable.⁸ Providence, in uniting man and woman, intended they should be a mutual support to each other, and for that reason assigned to each of them their peculiar functions. The man designed for business without doors is obliged to expose himself to heat and cold; to undertake voyages by sea, and journeys by land; to support the labours of peace and war, that is, to apply himself to the works of the field, and in carrying arms; all exercises which require a body robust, and capable of bearing fatigues. The woman, on the

⁴ In urbe luxuries creatur: ex luxuria existat avaritia necesse est: ex avaritia erumpunt audacia: inde omnia scelera gignuntur.—In rusticis moribus, in victu arido, in hac horrida inequalitate vita istiusmodi maleficia gigai non solent.—Cupiditates porro quas possunt esse in eo, qui ruri semper habitare, et in agro colendo vixit? Quae vita maxime disjuncta a cupiditate, et cum officio conjuncta.—Vita autem rustica parcimoniae, diligentiae, justitiae, magistra est.—*Cic. pro Rosc. Amer.* n. 39 and 75.

⁵ Columel. l. i. c. 8.

⁶ The lands were cultivated by slaves.

⁷ Colum. l. xii. c. 1.

⁸ Colum. in praef. l. xii.

contrary, too weak to sustain these offices, is reserved for affairs within doors. The care of the house is confided to her; and as the proper qualities for her employment are attention and exactitude, and as fear renders us more exact and attentive, it was necessary that the woman should be more timorous. On the contrary, because the man acts and labours almost always without doors, and is often obliged to defend himself against injuries, God has infused boldness and courage into him. Hence from all ages, both amongst the Greeks and Romans, the government of the house devolved upon the women, that their husbands, after having transacted their business abroad, might return to their houses free from all cares, and find a perfect tranquillity at home.¹ This is what Horace describes so elegantly in one of his odes,² [which Dryden translates thus:

But if a chaste and pleasing wife,
To ease the business of his life,
Divides with him his household care,
Such as the Sabine matrons were,
Such as the swift Apulian's bride.
Sunburnt and swarthy though she be,
Will fire for winter's nights provide,
And without noise will oversee
His children and his family;
And order all things till he come,
Sweaty, and over-labour'd, home;
If she in pens his flock will fold,
And then produce her dairy store,
And wine to drive away the cold,
And unbought dainties of the poor, &c.]

The ancients seem to have excelled themselves in treating this subject, which supplies so many fine thoughts and beautiful expressions. [Mr. Rollin gives here a prose translation of the passage at bottom, in the Georgics,³ which it was

1 Nam et apud Græcos, et mox apud Romano susque in patrum nostrorum memoriam, fere domesticus labor matronalis fuit, tanquam ad requiem forensium exercitationum omni cura deposita patribus familias intradomesticos penates se recipientibus.

2 Quod si pudica mulier in partem juvet
Domum atque dulces liberos,
(Sabina qualis aut perusta solibus
Pernicis uxor Appuli)
Sacrum vetustis extruat lignis focum
Lassi sub adventum viri;
Claudensque textis cratibus lætum pecus,
Distenta siccet uera,
Et horna dulci vina promens dolio,
Dapes inemptas apparet, &c.—*Hor. Ep. 2.*

3 O fortunatos nimium, sua si bona norint,
Agricolæ! quibus ipsa, procul discordibus armis,
Fundit humo facilem victum justissima tellus.
Si non, &c.

At securæ quies, et nescia fallere vita
Dives opum variarum; at latius otia fundis,
Speluncæ; vivique lacus; at frigida Tempe,
Mugitusque bouum, mollesque sub arbori somni
Non absunt: illic saltus ac lustra ferarum,
Et patiens operum, parvoque assueta juventus,
Sacra Deum, sanctique patres. Extrema per illos
Justitia excedens terris vestigia freta.

Virg. Georg. l. ii.

conceived would be no less agreeable in Mr. Dryden's version.

O happy, if he knew his happy state,
The swain, who free from business and debate,
Receives his easy food from nature's hand,
And just returns of cultivated land.
No palace, &c.
But easy, quiet, a secure retreat,
A harmless life, that knows not how to cheat,
With homebred plenty the rich owner bless,
And rural pleasures crown his happiness.
Unvex'd with quarrels, undisturbed with noise,
The country-king his peaceful realm enjoys:
Cool grots, and living lakes, the flowery pride
Of meads, and streams, that through the valleys glide;
And shady groves, that easy sleep invite,
And after toilsome days, a soft repose at night.
Wild beasts of nature in his woods abound,
And youth, of labour patient, plough the ground,
Inured to hardship, and to homely fare.
Nor venerable age is wanting there,
In great examples to the youthful train:
Nor are the gods adored with rites profane.
From hence Astræa took her flight, and here
The prints of her departing steps appear.

Georg. Lib. II. l. 439.]

The fine description Cicero gives us, in his essay upon old age, of the manner in which corn and grapes gradually arrive at perfect maturity, shows his taste for the country life, and instructs us, at the same time, in what manner we ought to consider those wonderful productions, that merit our admiration no less from their being common and annual. And indeed, if a simple description gives so much pleasure, what effect, in a mind rationally curious, ought the reality itself to have, and the actual view of what passes in vineyards and fields of corn, till the fruits of both are brought in, and laid up in cellars and barns? And as much may be said of all the other riches, with which the earth annually clothes herself. This is what makes residence in the country so agreeable and delightful, and so much the desire of magistrates and persons employed in serious and important affairs. Tired and fatigued with the continual cares of the city, they naturally cry out with Horace:⁴ "O country, when shall I see you? When will it be allowed me to forget, in thy charming retreats, my cares and solicitude, either in amusing myself with the books of the ancients, or enjoying the pleasure

4 O rus, quando ego te aspiciam, quandoque licebit
Nunc veterum libris, nunc somno, et inertibus horis,
Ducere sollicitæ jucundâ oblivia vitæ?

O rural scenes, and O serene abodes,
Wherein we seem to emulate the gods,
When, void of care, of passion, and of strife,
And all the busy ills of tedious life,
With you my happy hours shall I employ
In sweet vicissitudes of rest and joy,
In books, that raise the soul, and learned ease,
In sleep, in leisure, and in what I please? *Paraph.*

of having nothing to do, or reposing myself in sweet slumber?" The purest pleasures are, no doubt, to be found there. The country seems, according to the happy expression of the same poet,⁵ to restore us to ourselves, in relieving us from a kind of slavery, and in placing us, where we may justly be said to live and reign. We enter, in a manner, into a conservation with the trees and plants; we question them; we make them give us an account of the fruits they produce; and receive such excuses as they have to make, when defective in bearing: alleging sometimes the great rains, sometimes excessive heats, sometimes the severity of the cold.⁶ It is Horace who lends them this language.

All I have said sufficiently implies, that I speak no longer of that painful and laborious tillage, to which man was at first condemned: but that I have another in view, intended for his pleasure, and to employ him with delight; an employment perfectly conformable to his original institution, and the design of his Creator, as it was commanded Adam immediately after his formation. In effect, it seems to suggest to us the idea of the terrestrial paradise, and to partake, in some measure, of the happy simplicity and innocence which reigned there. We find that in all times, it has been the most grateful amusement of princes and the most powerful kings. Without mentioning the famous hanging gardens, with which Babylon was adorned, the scripture informs us, that Ahasuerus (Darius, son of Darius Hystaspes) had planted part of the trees of his garden, and that he cultivated it with his own royal hands, *Jussit convivium preparari in vestibulo horti et nemoris, quod regio cultu et manu, consitum erat.*⁷ [I do not find the latter part of this text in the English Bible.] We have said, that Cyrus the younger answered Lysander, who admired the beauty, economy and disposition of his gardens; that himself had drawn the plan, laid them out, and planted many of the trees with his own hands. *Ego omnia ista solum dimensus: mei sunt ordines, mea descriptio: multa etiam istarum arborum mea manu sunt sate.*⁸

We should never be willing to quit so delight-

ful a residence, were it possible for us to possess it always; and have endeavoured, at least for our consolation, to impose a kind of illusion upon ourselves, by transporting the country in a manner into the midst of cities; not a simple and almost wild country, but a trim, laid out, embellished, I had almost said, painted country. I mean those adorned and elegant gardens, which present so grateful and splendid a view to our eyes. What beauty, riches, abundance, variety of sweets, colours and objects. To see the unvariable constancy and regularity of flowers in succeeding each other, (and as much may be said of fruits) one would think that the earth, attentive to pleasing its master, endeavours to perpetuate her presents, by continually paying him the new tributes of every season.⁹ What a throng of reflections does not this suggest to a curious, and still more to a religious mind!

Pliny, after having confessed, that no eloquence was capable of expressing duly the incredible abundance, and wonderful variety of the riches and beauties, which nature seems to spread with complacency and delight throughout gardens, adds a very just and instructive remark. He observes upon the difference nature has made as to the duration of trees and flowers.¹⁰ To the trees and plants designed for the nourishment of man with their fruits, and for the structure of ships and edifices, she has granted years and even ages of time. To flowers and sweets, which serve only for pleasure, she has given only some moments and days of life; as if she intended to admonish us, that what is most shining and splendid soonest fades, and passes away with rapidity. Malherbe expresses this latter thought in a very lively manner, where he deploras the death of a very young and beautiful person.

Et rose ella a vecu ce qui vivent les roses,
L'espace d'un matin.

And lived a rose, as roses live,
A single morning's space.

It is the great advantage of agriculture to be more strictly united with religion and also moral virtue, than any other art; which made Cicero say, as we have seen, that the country life came nearest to that of the wise man; that is, it was a kind of practical philosophy.

5 Villice sylvarum, et mihi me reddentis agelli.

Hor. Ep. 14. l. 1.

Vivo et regno, simul ista reliqui, &c.

Hor. Ep. 10. l. 1.

6 Fundasque mendax, arbore nunc aquas

Culpante, nunc torrentia agros

Sidera, nunc hiemes iniquas. Hor. Oct. 1. l. 1. iii.

When the land fails, and in its fruits

Against the show'ry skies imputes,

Or the whole blame with equal reason casts

On summer's sultry suus, or winter's fatal blasts.

7 Esther l. 5.

8 Cic. de Senec. tut. n. 59.

9 Sed illa quante benignitas naturæ, quod tam multa ad vescendum, tam varis, tanque jucunda gignit: neque ea uno tempore anni, ut semper et novitate delectemur, et copia.—Cic. de nat. deor. l. ii. n. 131.

10 Quippe reliqua usus alimentique gratia genuit: Ideo, que secula annosque tribuit iis. Flores vero odoresque in diem gignit: magna, ut palam est, admonitione hominum, que spectatissimè florent, celerrime marcescere.—Plin. l. ii. c. 1.

To conclude this small treatise where I began it, it must be confessed, that of all human employments, which have no immediate relation to God and justice, the most innocent is agriculture. It was, as has been said, that of the first man in his state of innocence and duty. It afterwards became part of the penance imposed on him by God. So that both in the states of innocence and sin, it was commanded to him, and in his person to all his descend-

ants.¹ It is, however, become, in the judgment of pride, the meanest and most contemptible of employments; and whilst useless arts, which conduce only to luxury and voluptuousness, are protected and honoured, all those who labour for the welfare and happiness of others are abandoned to poverty and misery.

¹ Hate not laborious work, nor the husbandry, which the Most High hath created. *Ecclesiast.* vii. 15.

SUPPLEMENT BY THE EDITOR.

So far as regards the agriculture of the ancients, with the exception of what the Roman writers have left us, the sources of information are scanty and obscure. A few hints, scattered here and there among the multifarious productions of antiquity, are the only materials we possess on the subject. Our account of the agriculture of the ancient world must therefore necessarily be defective and meagre, until we arrive among the Romans, who carried the science to a state of very considerable perfection, and who have fortunately not only left us pretty ample information respecting their own rural economy, but also valuable incidental notices respecting that of various other nations.

It is impossible to determine what species of grain was first cultivated subsequent to the deluge. It may be safely presumed, that as Noah by divine direction laid up food for himself and family, for subsistence during the deluge, and for some time subsequent to it, so also various seeds of corn and vegetables would be preserved for sowing the earth. If this be granted, there is no difficulty in supposing that the early descendants of the postdiluvian patriarch were acquainted with the various species of seed, and also with the necessary arts of reaping, separating, and grinding grain. These arts must have been known in the antediluvian world, and to Noah and his immediate progeny, who constructed and inhabited the ark: and although many nations of antiquity doubtless used grain in a green state, it were contrary to all probability to suppose this to have been the case with the first descendants of Noah.

As the Egyptians are the most ancient people with which history, whether sacred or profane, has made us acquainted, the state of agricultural science among that sagacious race claims our first attention. It is certain from the accounts given us by Moses, unquestionably the most ancient historical documents that have reached us, that in the days of Abraham, Egypt was both populous, and so well cultivated as to be able not only to support its own inhabitants, but also to export large quantities of grain to other countries. That its exuberant fertility has in all ages been chiefly owing to the alluvial matter annually brought down and deposited by

the Nile is well known; and which has been estimated by Shaw as equal to a one hundred and twentieth part of the volume of water which it pours into the sea. The rise of the river begins generally in the end of May, or beginning of June. Its progress is very slow, and scarcely perceptible at first, and does not come to be violent till after the middle of June. The time when it reaches the appointed height varies, from the latter end of July to the middle, and sometimes the latter end of September. The term of continuance at the highest flood is from fifteen to twenty days. It gradually decreases from the middle of October to the middle of April, when the river becomes fordable in many places. The maximum state of the inundation is variable. Sixteen pikes or cubits is the proper height for the opening of the canal, by cutting down the dam, that so the waters of the inundation may enter the canal which runs through the midst of Cairo to the north-east, watering the plain to the extent of twenty leagues, and filling by the way the Lake of the Pilgrims. If the river want a single inch of this height, no tribute is due to the sultan for the lands watered by it, the produce being then scarce sufficient to pay the cultivator. If it increase to the height of twenty-three or twenty-four pikes, it is judged most favourable. If it rise beyond that, it does a great deal of mischief, not only by overthrowing houses and drowning cattle, but also by engendering a host of insects, which destroy the fruits of the earth. The natives prefer the rapid increase of the Nile to that which is more gradual, for it covers more space of land; and if the waters remain eight days over it, they do as much good as if they continued twenty days. In the Delta all the villages are built on artificial mounds, raised so high above the general level that the water cannot reach them. In Upper Egypt, on the contrary, most of the villages are little, if at all raised above the ground; and are only protected from the inundations of the river by artificial fences, made of earth and reeds. The solstitial rains amongst the Mountains of the Moon, and those of Abyssinia, are the sole cause of the inundations of the Nile.

At what period the system of irrigating the Delta of Egypt, by canals drawn from the Nile

and its branches, commenced, it is impossible now to determine. The Egyptians ascribe its invention to Osiris and Sesostris. Osiris, say they, enclosed the river on both sides with strong dykes, and erected sluices in proper places for letting out the waters upon the fields, as they had need of it. The lake Moeris was dug for these purposes, by a king of the same name, who flourished, according to Herodotus, nine hundred years before his day. The probability is, that as the demand for agricultural produce would increase with the population, so the idea of increasing the supply to the greatest possible quantity would suggest the propriety of banking the river, and of drawing canals from it into every part of the country. Where the ground was too high to be watered by canals, they raised the water by engines, principally by that machine called Archimedes' screw, thence named the Egyptian pump.

Rollin, in his account of the inundations of the river, states the cubit at a foot and a half. At this rate, the season for opening the canals and sluices would be when the river had risen twenty-four feet, for so he makes the sixteen cubits. But this is a mistake; the cubit or pike in the Nilometer or Mikyas being two feet eight inches, according to Dr. Shaw, Gabrielli, and Kalkasenda, an Arabian author. The sixteen cubits or pikes amount, therefore, to forty-two English feet eight inches. According to Dr. Bernard, the pike is twenty-eight inches nine lines, whilst Maillet states it at two Parisian feet, so that with him sixteen cubits amount to rather more than thirty-four English feet. Maillet further says, that, in order to cover all the adjacent grounds, it is necessary that the Nile should increase to forty-eight feet or twenty-four pikes, or upwards of fifty-one English feet.

When it is said, that no rain falls in Egypt, as mentioned by the ancients, it must be taken *cum grano salis*, or be understood of Upper Egypt, or the Thebaid; and it must also be so understood in a comparative sense in Deuteronomy, where the Lord, by Moses, told the people, that the land which they were to possess was not as that of Egypt, whence they came out, where they sowed their seed, and watered it with the foot as a garden of herbs, but that the land they were going to possess was a land of hills and valleys, and drank of the rain of heaven. It seldom rains at Cairo and higher up the country, and that only for a quarter, or half an hour in the evening. Maillet says, that in Lower Egypt it rained five or six times from November to April in 1692, 93, and 94, but that frequently three or four years pass in Upper Egypt without rain, and it is such a rarity there as to cause public rejoicings. This is confirmed by Dr. Pococke, who mentions also that the rains are frequent and heavy on the sea coast and in Lower Egypt, particularly from November to March, but that in Cairo they are moderate, and only in the months of December, January, and February, and that in Upper Egypt they had rain but twice, half an hour each time, in the course of eight years. In Egypt, however, the dew falls very copiously. "When we hear," says Clarke, speaking of Egypt, "that rain is unknown to the inhabitants, it must not be supposed that, on that account, the land is destitute of water. The vegetation of Egypt—even the redundant produce of the Delta—is not owing solely to partial inundation from the Nile, or to artificial irrigation. From all the observations we could make during our subsequent residence, it seemed doubtful whether any other country received so regular a supply

of moisture from above. Even the sands of the desert partake largely of the dew of heaven, and in a certain degree of the *fatness of the earth*. In all this sandy desert, palm trees are very abundant, and their presence is a never-failing indication of water below the surface. Where-soever they are found, a brackish and muddy pool may be speedily formed, by digging a well near the roots. The natives are chiefly engaged in the care of them, tying up their blossoms with bands formed of the foliage, to prevent their being torn off, and scattered with the wind. Our soldiers were at first ignorant of the extent of the mischief they occasioned by cutting down these trees, each of which proves as a small patrimony to the native who is fortunate enough to possess it."

Herodotus tells us that the Egyptians did not use ploughs in turning up the soil, but that as soon as the inundation of the Nile retired, every one sowed his own field while it was soft and wet, and then turned a herd of swine into it, who pressed the seed into the earth with their feet. Pliny, Ælian, and Plutarch, repeat the same tale after Herodotus. This story wears a very suspicious appearance. Hogs, it is to be suspected, would be more likely to devour the grain than press it into the earth. It would be impossible, besides, for them to extricate themselves out of the mud, in which it is said the sowers sunk to the knees. It is certain from the authority of Diodorus Siculus,² and of Pliny himself, and of modern travellers, that they anciently did, and still do plough their lands in Egypt. Herodotus probably never saw the Egyptian practice, and has mistaken the meaning of some more ancient author. When we are told that Osiris invented the use of the plough and the cultivation of vines, and that Isis invented agriculture, we may set these down as mythological fictions, although it is by no means improbable that the implements of husbandry were greatly improved during their reigns. We find that agriculture was generally practised in Egypt in Joseph's time:—and that husbandry was held in the highest estimation in Egypt may be inferred from the fact, that the sceptre of the Pharaohs was in the form of a plough. The Theban plough had a resemblance to the first letter of the Greek Alphabet, Α. This ancient plough was the archetype of an Egyptian hieroglyphical character. Upon an ancient image of Orus brought from Egypt by Dr. Clarke, two models of the ancient plough, the figure of the royal sceptre, are represented. On this figure not only is the entire model of the instrument complete, but even the twisted cordage binding the ploughshare to the handle is distinctly represented. In the left hand of Orus a stouter cord is represented, from which a harrow is suspended, hanging behind the left shoulder. This is clearly the instrument mentioned by Diodorus Siculus, who says that the priests and kings of Egypt bore a sceptre in the form of a plough. There were two methods of using the very simple instrument here represented—one being the more ancient, but the form of the plough remaining the same, which was that of an Alpha, with one side shorter than the other. As a hand-plough, the vertex, or top was headed with brass or iron, which the husbandman forced into the ground with his foot. It was then held in this position, ψ , and in this

² Lib. i. p. 43.

manner it is now used, by the inhabitants of St. Kilda. When used as a draught-plough, which must have been suggested by the improvements of a later age, the shorter limb of the Alpha was capped with metal, and it was then held in this position \angle , as it is now used by the people of East Bothnia.¹ This latter plough is also used by the Finlanders, with the addition of a double ploughshare.

We are informed from Horus Apollo, that the Egyptians, wishing to describe the antiquity of their origin, figured a faggot, or bundle of papyrus, as an emblem of the food they first subsisted on, when the use of wheat was yet unknown among them. This, however, Bruce affirms to be the Ensete, an Ethiopian plant, which was cultivated in Egypt, till the general use of wheat superseded it as an article of food. The stalk of this herbaceous plant, when boiled, has the taste of the best wheaten bread not perfectly baked, and if ate with milk or butter, is wholesome, nourishing, and easily digested. This symbol, therefore, does not prove that the early Egyptians ate plants before they discovered corn or wheat, but only that Ensete was one of the articles they used for food, or which occasionally supplied the place of wheat. There was another plant besides the Ensete which the ancient Egyptians used for food, called the Egyptian Lotus, an aquatic plant, and a species of water lily. "The water lily," says Herodotus, "grows in the inundated lands of Egypt. The seed of the flower, which resembles that of the poppy, they bake, and make into a kind of bread. They also use the root of this plant, which is round, of an agreeable flavour, and about the size of an apple. This the Egyptians call the lotus." Theophrastus also, in his History of Plants, lib. iv. c. 10. describes the manner in which both the seeds and the roots of this plant are eaten by the Egyptians, and, after Herodotus, places its site in the inundated lands of Egypt. It is mentioned by Prosper Alpinus under the name of culcas. It is the nymphæa lotus of Linnæus, and the colocassia of Pliny, who, however, confounds it with the Nilotica nelumbo, another species of water lily distinct from this, and described by Theophrastus under the epithet of Bean of the Nilotica nelumbo. The inundated places near the Nile at present produce abundance of this useful plant, now called the *eddo*. Its root is the food of a vast number of persons in the West Indies, and part of the East Indies, and in the South Sea Islands. It requires very little labour on the part of the cultivator, and is therefore exactly the kind of plant mentioned by the Greeks when they speak of lotus as a food produced with little or no labour. At all times of the year it has broad green leaves in great abundance, and the roots are eaten as the heads of our cabbages are, before the period of the plant's flowering.

What particular mode of reaping their grain was practised by the ancient Egyptians we are not told. The sickle, however, or something like it, is extremely ancient. The oldest traditions mention the sickle of Saturn, who is said to have taught the people of his time to cultivate the earth. The use of the sickle does not necessarily infer a knowledge of the art of working metals, which in these remote times was known to very few nations. Sickles might

be made of bone or wood. In Paraguay, at this day, the people cut down their corn with cows' ribs.

The method of separating the grain, by the people of Asia and Egypt, in the days of Moses, was by spreading out their sheaves upon a piece of hard and smooth ground in the open air, and driving oxen or other animals backward and forward over the heap for a long time. This method was also practised by the Greeks and several other ancient nations. Others used heavy planks stuck full of pegs and sharp pointed flints which they dragged over the sheaves. This method is still in use among the Turks. Ælian says, that in using oxen to tread out the corn, they rubbed the mouths of the oxen so employed with dung, to prevent them from eating. Others again bruised the ears by means of heavy carriages, as carts, sledges, &c., as seems, according to Varro, to have been the custom of the ancient inhabitants of Palestine, and which are still used for the same purpose in Gascony and Italy. In China this work is performed by a heavy roller of rough marble. All the above-mentioned methods are still in use in almost all hot countries. The use of the flail is yet unknown in the East, where agriculture first began.

Hand corn mills were in early use in Egypt. That these were used in Palestine in the days of Abraham, seems evident from the command given by Abraham to Sarah, to knead three measures of fine meal, as it is difficult to conceive how meal could be made *fine* without the use of the mill. The process of pounding grain in a mortar is exceedingly laborious, and the meal thus obtained must be coarse. But if hand corn mills were used in Palestine at so early a period, 430 years before the Exodus, there is every reason to conclude that they were then used in Egypt also. It was the office of slaves and servants to turn these handmills, which were common in all parts of Palestine; and in Lapland and in Scotland they are called *querns*. They may be denominated the primeval mills of the ancient world, and are still to be found in many uncivilized countries. As the employment of grinding corn with these stones is in the east the exclusive employment of females, the practice illustrates the observation of our Lord when predicting the destruction of Jerusalem: "Two women shall be grinding at the mill; the one shall be taken, and the other shall be left." "We saw," says Dr. Clarke, speaking of Nazareth, "two women grinding at the mill, in a manner most forcibly illustrating the saying above mentioned. They were preparing flour for our bread. The two women, seated upon the ground opposite each other, held between them two flat round stones. In the centre of the upper stone was a cavity for pouring in the corn, and by the side of this an upright wooden handle for moving the stone. As the operation began, one of the women with her right hand pushed this handle to the woman opposite, who again sent it to her companion, thus communicating a rotatory and very rapid motion to the upper stone, their left hands being all the while employed in supplying fresh corn as fast as the bran and flour escaped from the sides of the machine." That such mills were used in Egypt before the Exodus is clear from the last plague denounced by God against Egypt. "All the first-born in the land of Egypt shall die, from the first-born of Pharaoh, that sitteth upon the throne, even to the first-born of the maid-ser-

¹ Clarke's Travels, vol. v. p. 235. Note.

vant, that is behind the mill."² The millstone is mentioned in the book of Job; and Moses forbids the Israelites to take the upper or nether millstone in pledge.³

How, or in what manner the Egyptians converted meal into bread, we are not told. Till this discovery was made, mankind may be said to have enjoyed but very imperfectly the advantages of grain. Its conversion into bread is the highest step in the art of preparing farinaceous food. Many nations of antiquity were long ignorant of this art, and many tribes in modern times are equally so. The first mode of using meal amongst rude and barbarous nations, would be by mixing it with water, as the people in the Highlands of Scotland, and others, do at this day. A further step would be that of boiling the mixture; but this is a step to which many tribes have never yet attained, as before the arrival of our countrymen in the South Sea Islands, the natives were totally ignorant of the art of making water to boil. The most common use which the ancients made of meal was a kind of hasty-pudding boiled in earthen vessels, similar to the *furro* of the Italians, or our Scotch *porridge*. Meal thus prepared was the standing food of the ancients, which they sometimes dressed alone, and sometimes with animal food, when they could procure any. This mode of using meal subsisted very long, and is still common in Scotland. It was in use amongst the Romans, Greeks, Persians, and Carthaginians. The ancient inhabitants of the Canary Islands were also ignorant of the art of making bread. They ate their meal baked with meat and butter. The Indian tribes of North America make what is called their *sagamite* of Indian corn, roasted in the ashes, pounded in a wooden mortar, and baked in an earthen vessel with all kinds of meat. From what has now been stated, it would probably be a long time before the art of converting meal into bread was found out amongst those nations which were once in a state of comparative barbarism.

But in whatever manner the conversion of meal into bread was first effected, we are certain the practice was very ancient in the east. We are told that Abraham served up bread to the three angels that appeared to him in the plain of Mamre.⁴ The manner of baking bread at that time was very simple. The ingredients were only meal and water, and perhaps a little salt. Their bread was not thick and raised as ours is at present; it was what in Scripture is denominated unleavened bread, a kind of small cake, easily broken with the hand, and eaten without a knife; hence the often repeated phrase used in Scripture of *breaking of bread—to break bread*. It appears, also, that they did not knead their dough, but baked it immediately before they used it—a practice still existing in several countries. A thin piece of dough was laid on the hearth-stone; it was then covered up with hot ashes, and allowed to remain in that state till it was judged sufficiently baked. It was thus that Sarah prepared the bread which the Father of the Faithful set before the angels. Several of the American tribes still prepare their bread in the same manner. The paste is first made; then wrapped up in leaves; then covered with not ashes, and afterwards with live coals. Sometimes stones sufficiently hot are used for

this purpose. The practice of several modern nations induces us to think that they used, anciently, heated stones, instead of ashes or coals. In some places of Norway they at this day bake their bread between two hollow flints. The bread of the Arabians is a kind of cake, baked between two stones very much heated, or the paste is laid upon one hot stone, and then covered up with flints made very warm. The bread of the Circassian Tartars is made of the meal of millet, kneaded with water into a very soft paste, and then half-baked in earthen moulds, and eaten very hot. Among many of the African tribes, their bread is only meal kneaded with a little water, which they divide into small parts, and bake on a stone, or in an earthen pot on the fire.

The invention of ovens is certainly very ancient. They are spoken of in the days of Abraham.⁵ The honour of their invention is ascribed by some to one Anuns, an Egyptian; but they were in all probability different from ours, and were merely a kind of portable baking pans, made of clay or fatish earth. They were probably similar to those used by the Turks, which are made of clay, and resemble an inverted tub or bell. The Turks heat them by putting fire in the interior, and then lay the paste, formed into cakes, on the top. As these cakes are baked, they are successively removed, and others put in their room. This manner of baking bread is still practised in the east.

When the art of leavening bread commenced, or how it was discovered, is unknown. It might be long posterior to the art of making meal into bread. There is every reason to think that its discovery was fortuitous; for the notion of leavening bread is not one of those that would naturally suggest itself to the mind of man. The world, as Goguet remarks, was indebted to the economy of some person for the discovery. This person, in order to save a little old dough, would mix it with the new, without foreseeing the utility of the mixture. He would be very much surprised to find, that this piece of old dough, so sour and distasteful of itself, rendered the new bread much lighter, more palatable, and easier of digestion. The use of leaven is, however, very ancient, and was known before the time of Moses; for that legislator, when he prescribed to the Israelites the manner of eating the Paschal Lamb, forbids them to use leavened bread. He also further observes, that when the Israelites went out of Egypt, they ate unleavened bread, baked in the ashes, because they were thrust out of Egypt, and had no time allowed them to leaven their bread.

No practice was so general in ancient times as that of roasting grain, and it is still in use among savage nations. Grain was originally used by many in its natural state; and we are told by Pliny and others, that of all the farinaceous plants, barley was the first that men fed upon. The grains of barley are involved in a certain husk or coat, from which they are separated by the millstone. But the far greater part of savage nations in their rude state knew nothing of mills. They, therefore, made use of fire as the only method they were acquainted with to detach the grain from the husk. A further advantage found by this practice was, that the fire communicated an agreeable flavour

² Exod. xl. 4.

³ Deut. xxiv. 6.

⁴ Gen. xviii. 6.

⁵ Gen. xv. 17.

to the grain; for when half roasted, its taste is pretty agreeable. In Ethiopia or Abyssinia, travellers commonly carry no other provisions with them but parched barley. We read in Scripture, that Abigail, the wife of Nabal, among other articles of provision, brought five measures of parched corn to David. When in after times these nations came to grind their grain, this method of roasting it was found of great advantage. The action of fire upon the grain rendered it more easy to be bruised and stripped of its coat. Diodorus Siculus tells us, that the natives of Britain first pressed the grains out of the ears, then pounded them in a mortar, and then ate them, and that these grains, so bruised and pounded, constituted their principal food.¹

Before men could make a proper use of grain, they must also have discovered the art of separating the meal from the bran. There can be little doubt, however, that for some time they ate both together, as some unpolished nations do still. How they separated the one from the other, antiquity does not inform us. They would perhaps endeavour at first to pass their pounded corn through coarse sieves made of twigs, osier baskets, or the like, or perhaps even by winnowing. All these methods are still used by the savages of South America and other parts. The Egyptians made their sieves of the filaments of the papyrus plant, or of the tenderest rushes. The Greeks used the papyrus for the same purpose. The ancient Spaniards made theirs of thread. The Gauls were the first who had the art to make their sieves of horse's hair.

It has been conjectured, that Sesostris was the first who divided Egypt by measure amongst his subjects, and thus gave a beginning to the science of geometry. Sir Isaac Newton ascribes the origin of geometry to Moeris, the fifth from Sesostris, confounding Sesostris with Osiris. "Moeris," says he, "for preserving the division of Egypt into equal shares among the soldiery, wrote a book of surveying, which gave a beginning to geometry." But it is plain from Scripture, that an exact division of private landed property existed in Egypt before the days of Joseph, whose administration commenced 900 years before the period assigned by Newton. "And Joseph bought all the land for Pharaoh; for the Egyptians sold every man his field, because the famine prevailed over them, so the land became Pharaoh's. And as for the people he removed them from one end of the border of Egypt even to the other thereof. Only the land of the priests bought he not, for the priests had a portion assigned them of Pharaoh, and did eat their portion which Pharaoh gave them; wherefore they sold not their lands. Then Joseph said unto the people, Behold, I have bought you this day, and your lands, for Pharaoh; lo, here is seed for you, and ye shall sow the land. And it shall come to pass in the increase, that ye shall give the fifth part unto Pharaoh; and four parts shall be your own, for seed of the field, and for your food, and for them of your households, and for food for your little ones. And Joseph made it a law over the land of Egypt unto this day, that Pharaoh should have the fifth part, except the land of the priests only, which became not Pharaoh's."² We have here the description of a country very exactly divided out into private property. If property had not at that time been

settled with the most minute exactness, Joseph would have had no occasion for employing the troublesome expedient of transplanting the people reciprocally from one end of Egypt to the other. He had recourse to this expedient evidently to secure the monarch in his new property, and prevent the evil effects of that predilection which people naturally possess for an old paternal inheritance. There was, of course, a complete revolution in landed property. The whole of it became the king's, and was henceforth held of the crown, by a tenure of a fifth of its produce. The priesthood, however, preserved theirs. The very circumstance of one fifth to be paid on all landed property, supposes that private property had been well and minutely settled. In the former division, the land had been subdivided between the king, the priests, and the people, each having their distinct and hereditary share; but by this new act of Joseph, the land fell wholly into the hands of the king and the priests. Diodorus Siculus tells us, that the land belonged to the king, the priests, and the soldiery. Now, though this account seemingly contradicts that of Moses, it will be found on examination, that the contradiction is not real, but only apparent. It may be presumed, that the plan of Joseph in farming out the land, to the transplanted proprietors, upon the tenure of a fifth of the annual produce, would continue to the reign of that king who "knew not Joseph;" and it is plain, that this measure prodigiously increased the power of the crown, the evil effects of which were for a while counterbalanced by the regulation. The new monarch who arose sometime after the death of Joseph would do every thing in his power to obliterate the memory of that statesman. He appears to have been a despotic prince, and to have adopted a new scheme of management suited to arbitrary power. We read of no standing militia in Egypt till the reign of this prince and his successors. The probability therefore is, that, instead of farming out the lands to the old proprietors, agreeably to the act of Joseph, he took them away from them, establishing a standing militia, to whom he gave the land, and to whom the people became a kind of villains, being obliged to personal service under these new feudatories. If this be supposed, Diodorus and Moses become reconciled—the one speaking of the state of landed property subsequent to the death of Joseph, the other of its state prior to the time of Joseph, and the change, consequent on the famine, effected by the regulation of that statesman. It ought to be remembered also, that Moses was born about sixty-four years after the death of Joseph, and fifteen hundred years before the time of Diodorus Siculus! The opinion, therefore, that the science of geometry originated from the cutting of cross canals by Sesostris, and the dividing the large champaign country of Lower Egypt into square fields, appears to be absurd. The reasons for making these canals were evidently to drain the marshes of this vast level, and render it capable of cultivation, and to connect the branches of the Nile together, so that the whole country might reap the advantages of water communication and of irrigation. But a work of this nature is never projected till private landed property has been well settled, and till an increase of population has increased the demand for the necessities of life. Ground once divided by such canals was in no danger of a change of land-marks, and consequently had no need of future surveys. The most probable cause,

¹ Lib. v. p. 347.

² Gen. xlviii. 20, &c.

therefore, of the invention of geometry was the necessity of frequent surveys which existed before these canals were cut, when the annual inundations of the Nile perpetually obliterated all landmarks.

The fertility of Egypt must have been prodigious in ancient times, if what Diodorus Siculus affirms be true, that in his day it contained thirteen millions of people, and had even then declined from its former redundant population, which, he says, consisted before his time of seventeen millions. The wonder is heightened, when we consider that with such a numerous population to support, it exported vast quantities of grain to Rome, and afterwards to Constantinople. Our author states the exportation to Rome to have been twenty millions of bushels of wheat, which is equal to 2,500,000 quarters. Such a quantity was more than sufficient to have supplied the whole population of Rome, though that population should have doubled the population of London in the present day. The ambiguity of the statement lies in the word *modii*, translated *bushels* in Rollin. A bushel is an English measure, eight of which go to a quarter, and four of which make about one boll Scotch measure. Now, the Roman *modius*, according to Arbutnot and Adam, is equivalent to a peck English, or only the fourth of a bushel. In this case, the total quantity amounts to five millions of bushels (instead of twenty millions), which is equal to 625,000 quarters, English measure, or 1,250,000 bolls, annually. Others have enlarged the quantity to 7,140,000 bushels, by taking the Roman *modius* at near a peck and a half; but I prefer the authorities mentioned above for the capacity of the *modius*. Our author further says, that Constantine ordered a daily distribution of 80,000 bushels of corn, which came from Alexandria, to be made at his new capital of Constantinople. Here we have bushels again as the translation of *modii*. But the error here is apparent, as no one can believe that the newly founded capital required a supply of 10,000 quarters of wheat for its daily consumption, or 3,120,000 quarters annually. The annual supply is stated in the thirteenth Edict of Justinian, at 8,000,000 *modii* or pecks, or 260,000 quarters, as Gibbon has judiciously remarked. If Egypt was so populous as Diodorus Siculus has affirmed it to have been, the skill and industry of the ancient inhabitants must have greatly exceeded that of the present possessors—a confused medley of Copts, Turks, and Arabs, whose habits have never been favourable to persevering labour, or agricultural pursuits.

It is difficult to believe what the ancients have reported of the fertility of certain countries. Herodotus tells us, that in Babylonia, the soil produced 200 and sometimes 300 fold; and Pliny says, that in Lybia, a bushel of wheat produced 150 for 1. Yet Shaw, a most accurate observer, informs us, that the bushel of wheat does not there produce above 10 or 12 for 1. He was told, indeed, that certain districts produce much more, but he assures us, at the same time, that the crop never comes to an hundred fold. Four hundred stalks of wheat was sent to Augustus from Lybia, all coming from one grain, and fixed to the same root. Another seed as productive was shown to Nero. Shaw himself saw, at Algiers, a seed of wheat which had 60 ears, and he speaks of another which had 120. But these are only extraordinary instances of what may be produced by particular seeds, not of

a whole crop. There is a great difference between the produce of a seed which grows solitary in a field, and those which spring up together in a sown field. One seed which grows alone will produce a hundred times more than seeds that are sown together in great numbers in the same place. The stalks spoken of above had probably grown in some place where they were removed on all sides from other seeds or plants.

Respecting the land of Palestine, we have abundant proof that agriculture was well understood there both by the Canaanites, its ancient possessors, and the Israelites who expelled them. This land was originally settled, like Egypt, by the descendants of Ham, who appear to have been a civilized race from the beginning. That it was, at an early period, both a very fertile and well cultivated country, is evident from sacred history, and from the vast population it supported. In the days of Abraham, the population was not so great as in after times. The inland Canaanites seem to have dwelt in cities, and cultivated the soil, whilst the Perizzites seem to have been a pastoral tribe, and those who inhabited the sea coast applied themselves to commerce. Another tribe of Egyptian descent, called Philistines, at a very early period seized the sea coast to the south of the Canaanites and on the borders of the desert that separated Palestine from Egypt. So rich and fruitful was the land of Canaan, that it was emphatically designated by Moses, a land that flowed with milk and honey—a land of brooks and waters, of fountains and depths, that spring out of the valleys and hills—a land of wheat and barley, of vines, figs, and pomegranates, of olive and honey—a land where there is no lack of any thing—a land whose rocks are iron, and out of whose mountains thou mayest dig brass—a land wherein thou shalt eat bread without scarceness.³ All this the Israelites found to be literally true. It even surpassed in many particulars the so much celebrated land of Egypt, especially in the vast numbers of cattle which it bred, and in the quantity and excellence of its varied fruits. It is quite plain that the olives and oil of Canaan exceeded those of Egypt in fulness, since the tribes exported them thither; and as for vines, Herodotus tells us, that in his day the Egyptians had none at all, but supplied the want of wine with a liquor made of barley. Rabshakeh made no scruple to style Palestine a land of corn and wine, of bread and vineyards, of oil-olive and honey. The wines of Gaza, Ashkelon, and Sarepta, were famed amongst the most remote nations, and the wine of Bethleheim was equal, if not superior, to any of the others, while that of Lebanon, mentioned by Hosea the prophet, was no less celebrated for its excellent flavour.

Several circumstances contributed to produce a wonderful fecundity in the soil of the Promised Land, such as the excellent temperature of the air, which was seldom subjected to extremes of heat or cold; the regularity of its seasons, especially those of the former and latter rains; the natural fitness and fertility of its soil, which generally neither required manure nor dung, and which could be ploughed with a single yoke of oxen, and a small kind of plough, for the soil was, and still is, so shallow, that to have gone deep into it would rather have been injurious than otherwise. The crops of grain were

³ Deut. viii. 7, &c.

produced twice a year, and the quality of these was so good, that we are told the bread of Jerusalem was preferred before all other bread. The tribe of Asher produced the best corn, and in greater quantities than any other tribe. Solomon, we read, could afford to send yearly, 20,000 eors, or measures of wheat, each equal to an English quarter, or 32 pecks, and as many measures of oil, each containing in English measure, 75 gallons, 5 pints, to Hiram, king of Tyre, over and above what went to support the inhabitants, and what was exported into other countries. In the time of Herod Agrippa, we find that the inhabitants of Tyre and Sidon were nourished by the king's country, as in the days of Solomon. Palestine had the greatest variety of fruit trees in the highest perfection, which were covered with a constant verdure, the new buds always appearing on the same boughs before the old fruit was ripe. Excellent pickles and sweetmeats were made of the superabundant buds of its citrons, oranges, and apples of paradise. Its vines yielded grapes, twice, and sometimes three times a year, of the finest flavour and very large, great quantities of which were dried up and preserved for use, as well as figs, plums, and other fruits. Its palm trees and dates were in great repute, and the plain of Jericho, among other places, was famed for the abundance and excellence of that fruit. But what gave the Promised Land most celebrity, was the shrub which produced the balm of Gilead, so famous among the Greeks, Romans, Egyptians, and other nations. Sugar canes were also cultivated in abundance, and the cotton, flax, and hemp used by the inhabitants were mostly of their own manufacture and growth, except some of a finer sort which was imported from Egypt.¹ So pregnant is the Bible with proofs of the exuberant fertility, and the immense population of the Promised Land, that nothing but a strong bias to that infidelity which calls every scripture statement in question, could lead any to doubt of the fact, merely because the country now, under a despotic and oppressive government, makes so melancholy a figure. There is no just arguing from its present to its past state. Successively wasted and destroyed by the Romans—then by the Saracens—then by the Crusaders—and now under the iron yoke of Turkish despotism, and subjected to bands of plundering Arabs—is it possible to conceive that it can now present the aspect of cultivation, fertility, and abundance, which it formerly did? The ancient possessors of this once rich, populous, and happy land, were a very different people from those who now possess it. Secure of their property and the fruit of their labour, they knew how to improve every corner of their land, and had even, by proper care and manure, made places, naturally barren, yield much valuable produce, so that the very rocks, which now appear bare and sterile, produced corn, pulse, or pasture, being, by the persevering industry of the people, covered with mould, which, through the indolence of succeeding proprietors, has been suffered to be washed away by rains and storms. The kings of Israel encouraged every species of agriculture, both by precept and example. Above all, the people had the divine promise

given of a blessing to their honest endeavours in industry, so long as they kept the law of their God.² Not only is the ancient fertility of Palestine attested by scripture, and the concurring testimony of pagan antiquity, but even by Julian the Apostate himself, who frequently, in his Epistles, makes mention of its perpetual fecundity, and the superabundance and excellence of its agricultural productions, whether of the garden or the field. Besides, several modern travellers, as Dr. Shaw and Dr. Clarke, who have viewed it under its present doleful aspect, tell us, that there are still such visible signs of its natural richness and fertility, as plainly show, that the want of culture is the main, if not the only, cause of its present poverty and barrenness.³

While Assyria was a powerful empire, Egypt a refined and enlightened kingdom, and while the Sidonians, an industrious and commercial people, were traversing in ships the wide expanse of the Mediterranean, the Greeks, ignorant of the most necessary arts, are said to have fed on acorns. These, indeed, seem to have been at one time their chief support. There was a custom in use at Athens of recalling the memory of the ages of rusticity and ignorance, by presenting to each new-married pair, on the day of their nuptials, a basket of acorns mixed with bread. The acorns eaten by the primitive Greeks were not, however, those of the common oak, which are too bitter and unsubstantial to have furnished food for man in any state, but those of the evergreen oak, *que deciduant*, as Ovid⁴ says, *patula Jovis arbore*. Hence it is not so improbable as it might appear at first sight, that the primitive Greeks lived on acorns. Diodorus Siculus tells us, that the first inhabitants of Greece were absolute savages, going out in small parties to make war on the wild beasts of the field, who kept them in continual alarm, and obliged them to band together for their mutual safety. They had not sagacity sufficient to distinguish between the wholesome and poisonous vegetables, nor skill enough to lay up and preserve the fruits of autumn for their winter food.⁵ The scholiast, on the fourth Ode of Pindar, describes the primitive state of the Peloponnesian Greeks in the following manner:—"Now some have affirmed that the nymphs who have officiated in the sacred rites were called Melisse. Of these Mnaseas, of Putana, gives the following account:—'They prevailed upon men to relinquish the abominable practice of eating raw flesh torn from living animals, and persuaded them to use the fruit of trees for food. Melissa, one of them, having discovered

² See Deut. xxviii. 4–15.

³ Those who wish a more detailed account of the climate, soil, and agriculture of the Holy Land, may consult the first volume of Reland's Palestine, a matchless work of its kind for laborious research and varied erudition; Harmer's Sacred Observations; Burder's Oriental Customs; Paxton's Illustrations of the Geography, &c. of Scripture, especially of Palestine; Michaelis' Geographical Introduction to his Philosophical Commentaries on the Law of Moses, where they will find an elaborate and learned dissertation on the limits of the Holy Land; the Travels of Mr. Buckingham in the tract east of the Jordan, a work well worth the perusal; and, finally, Burckhardt's Travels, vol. ii. who travelled almost the whole tract from Lebanon southward to the Red Sea. These two last works are of great use in elucidating scripture geography; for as the territory to the east of the Jordan, which embraces the country granted to the half tribe of Manasseh, and those of Gad and Reuben, had never been explored by prior European travellers, it may be justly said that till these appeared but half of Palestine was known.

⁴ Metam. lib. i. 103–6.

⁵ Diod. Sic. lib. i.

¹ The learned Dr. Forster, in a dissertation on the fine linen of Egypt, is of opinion that it was a species of fine cotton cloth.

bee-hives, ate of the honey-combs, mingled the honey with water for drink, and taught the other nymphs to use the same beverage. She called bees *Melisse*, from her own name, and bestowed much care on the management of them. These things,' says he, 'happened in Peloponnesus, nor is the temple of Ceres honoured without nymphs, because they first pointed out the mode of living on the fruits of the earth, and put an end to the barbarous practice of feeding on human flesh.' The same ladies, too, from a sense of decency, invented garments made of the bark of trees."

The first hordes who migrated to Greece found it, like most other countries when newly discovered, covered with woods, and inhabited solely by wild beasts. They had, therefore, to clear the former, and extirpate the latter, before the country could be rendered a safe or healthy abode. These are difficulties with which all new settlers in a prior uninhabited country have to contend. The fabulous or mythological period of Grecian history is filled, of course, with the exploits of the early heroes against the animals of the forests, as lions, wild bulls, and enormous boars. What tended for a long time to impede the civilization of the Greeks was, the constant change of inhabitants, and the successive contests of original settlers with new emigrants. Of these emigrants, some came by land from the north; some by sea from the east or south: some mingled amicably with the older possessors; others subdued or expelled them. The rich vales, such as those of *Bœotia*, *Thessaly*, and *Argos*, which, without cultivation, would be excellent pasture for cattle, were the coveted territories, and these were always changing possessors. Of the expelled, some wandered in quest of unoccupied vales, or in their turn drove out the inhabitants of the tract they came to. Others, betaking themselves to the neighbouring mountains, harassed the new settlers, and sometimes recovered their old settlement in the vale. When any of them abandoned their pristine abode, they did it with little regret, thinking, as *Thucydides* remarks, that a livelihood might be obtained any where, and anxious for nothing more; for being always uncertain when a more powerful tribe would claim their territory, they had little encouragement to build, or plant, or provide in any way further than for present need. Another circumstance which long operated as a bar to all settled habits and agricultural pursuits among the Greeks was, the love and practice of piracy. The great extent of sea-coast which the country embraced, the innumerable harbours along its winding and deeply indented shores, and the peculiarity of its adjacent sea, where small islands were so thickly studded on its surface, that the inhabitants of these and the neighbouring shores were mariners by necessity, rendered the Greeks a roving, restless, piratical people. Cattle, as the most obvious means of subsistence, were first the object of plunder. Afterwards, when the inhabitants of certain parts had by degrees settled to agriculture, men, women, and children were sought for slaves: and water expeditions were soon found to be most advantageous for carrying off the spoil. Also, even in their most barbarous state, the Greeks became acquainted with the value of the precious metals; for the *Phœnicians*, whose industry, ingenuity, and adventurous spirit of commerce led them early to explore the farthest shores of the Mediterranean, and even to risk the dangers of the ocean beyond, dis-

covered mines of gold and silver in some of the isles of the *Ægean*, and on its northern coast. They formed establishments in several of the islands; and *Thasos*, which, having similar mines, lay conveniently also for communication with the most productive mines of the continent, became the seat of their principal factory in the days of *Cadmus*. Thus was offered the most powerful incentive to piracy in a sea whose innumerable islands and ports afforded singular opportunity for the practice. It was also encouraged by the *Phœnicians* themselves, who frequently enticed the unsuspecting inhabitants of a sea-port on ship-board, carried them off captive, and sold them in the market of *Sidon*, pretty much as our modern slave dealers do on the coast of *Guinea*. So far were the Greeks from thinking piracy either mean or degrading, that the living by plunder, whether on land or sea, gave a high reputation for bravery and spirit. Piracy was not confined to small bands of outlaws; the most powerful communities fitted out expeditions, took what ships they met, and often fell upon the villages on the coast, killed the men, and carried away the women and goods to their ships. "The ancient Greeks," says *Strabo*, "were generally addicted to spoil, and covetous of other people's possessions for want of good land at home." "To this day," says *Thucydides*, who lived about the time of the *Peloponnesian* war, "the customs that prevail among great part of the Greeks are of the old stamp, (that is, love of plunder) as among the *Locri*, *Ozœ*, the *Ætolians*, the *Acarnanians*, and the inhabitants of the bordering coasts of *Epirus*." This state of things continued till the reign of the celebrated *Minos*, king and legislator of *Crete*. This able prince kept a strong fleet of armed vessels in constant activity, against those pirates who infested the *Ægean* sea, and conducted his measures with such vigour and judgment, that he established security throughout every part of the *Grecian* seas. Before the age of this prince, as we are assured by *Thucydides*, such had been the excesses of piracy, that all the shores both of the continent and islands of Greece were nearly deserted; the ground was cultivated only at a secure distance from the sea, and there only, towns and villages were to be found. The evil was, however, no sooner repressed than the active spirit of the Greeks led them again to the coast; the most commodious havens were occupied; the spirit of adventure and industry, formerly excited in robbery, was turned to commerce; and as wealth increased, towns were fortified, so as to secure them against the renewal of former evils. But this salutary state of things was changed by the death of *Minos* and the dissensions in *Crete*; and the people reverted to nearly their former condition, till considerably after the epoch of the *Trojan* war. Robbery by land, and piracy by sea, became again common. There was no security for property on either element. "All the inhabitants of Greece," says *Thucydides*, "went then constantly armed, because their dwellings were not fortified; neither was there a safe communication or peaceable intercourse between one tribe and another."

We have a lively portraiture of the husbandman's life in two of the largest and most fruitful districts of *Thessaly*, given by *Xenophon* in the *Anabasis*.¹ It occurs in the description of

an entertainment given by the Greek army while encamped at Coryra, to the *migisters* of Corylas, prince of the Paphlagonians. Among both Greeks and barbarians, as among the Orientals at this day, the meal was commonly succeeded by dances and pantomimes. After a pantomimic dance, performed to the music of the flute by two Thracians, in the manner of their country, armed as targeteers, some Ænians and Magnetes, people of the southern and northern borders of Thessaly, stepped forward, and, in the full armour of the phalanx, exhibited a dance, called the Carpean dance. The manner of it, says Xenophon, was this: "Flutes playing, and time being observed in all motions, one advances as a husbandman: grounding his arms, he sows and drives his oxen, often looking round him as in fear. Another approaches as a robber: the husbandman seeing him, runs to his arms, and a combat ensues. The robber prevails, binds the husbandman, and drives off the cattle. Then the dance is varied; the husbandman is victorious, binds the robber's hands behind him, yokes him with the oxen, and drives off altogether." The Magnetes inhabited the dales of Pelion, along the sea shore, and the northern bank of the Peneus, under the heights of Olympus, opposite Macedonia. The Ænians held the upper part of the Sperchius and the northern borders of mount Ceta, to the boundaries of Ætolia. They boasted the purest blood of Grecian race. Neither this proud claim, however, nor their title to support from the Thessalian confederacy, nor the valour and skill in arms of every husbandman among them, exercised in the daily care and protection of his cattle and corn, nor the strength of their highland fastnesses, availed them in the end. Among the wars of their more powerful neighbours on the west, namely, the Ætolians, Acarnanians, and Epirots, the Ænians, according to Strabo,² were extirpated. Of their neighbours on the southern side of mount Ceta, the Dorians, a remnant just sufficed to keep the name from perishing. In the rest of Greece, as in Laconia, Elis, and Attica, &c., the situation of the cultivator was indeed less unfortunate, but by no means comfortable or secure.

Under these circumstances—the early addiction of the Greeks to piracy—their loose, roving, and unsettled life—the insecurity of property—and the uncertain remuneration for agricultural labour—husbandry could not possibly flourish; and it was therefore never a public pursuit, or a theme of discussion among Greek writers. The writings of their old poets were all adapted to the maritime taste of the people; and continued to be so whilst the democratical and most literary state in Greece preserved maritime sovereignty, and compelled its allies to furnish ships of war, to assist in maintaining that naval supremacy. In none of the Grecian states was agriculture of such importance as to exercise much influence on manners or literature; and in no part of the country were the people ever removed so distant from the capital as to imbibe a predilection for husbandry. In Thessaly and Lacedæmon, agriculture was considered a degrading employment, and its cares were committed to slaves. The extensive valley of Boeotia, with its conterminous vales, were often desolated by floods. On the small but beautiful Isles of the Ægean and Ionian Seas,

farmers of any considerable size could scarcely be laid down. Central Peloponnesus, with its mountainous and barren soil, was fitted only for pasturage.

As pasturage generally precedes tillage, so we see in Homer's time, that cattle, in the scarcity or non-existence of money, constituted the usual standard of value. The golden armour of Glaucus was, we are told, valued at a hundred oxen; the brazen armour of Diomedes at nine oxen; the tripod, the first prize for wrestling at the funeral of Patroclus, at twelve oxen; and the female slave, the second prize, at four oxen. When Eumæus, in the *Odyssey*, would convey an idea of the opulence of his master Ulysses, he does not speak of the extent of his lands, or of the quantity of his moveables, but of his herds and flocks only. The same mode of estimating the greatness and wealth of Job is used by the sacred penman. Commerce seems to have been entirely conducted by barter; for we have in the *Iliad*, a description of a supply of wine brought to the Grecian camp, where

Each, in exchange, proportion'd treasures gave,
Some brass or iron, and some an ox or slave.

Pope, b. vii. 568, 69.

Though the peninsula of Attica enjoyed the purest atmosphere and the clearest sky, and its lengthened summer was gilded by the brightest beams of the sun, yet its soil was metallic and barren. The excessive inequalities in its surface, rendered agricultural operations difficult and dangerous. The streams were overflowing torrents, which stripped the soil, leaving nothing but a light sand, on which grain could scarcely grow. Barley was the only grain that was produced in plenty. The inhabitants were, therefore, under the constant necessity of purchasing other grain from strangers, and often from their enemies. The soil of Attica, however, was favourable on its northern base for the cultivation of vines and olives. Even the summits of its most elevated mountains were covered with evergreen oaks and cypresses, and especially with those pyramidal firs which are and ever will be the chief embellishment of a Grecian landscape. The soil, moreover, abounded in saline springs and bitter plants, and was consequently more adapted for rearing goats, than any other animals. Hence, at one time, the fourth part of the population of Attica existed solely by their flocks, and in the days of Solon, the goat-herds were more numerous than the labourers. Agriculture did not at first extend beyond those valleys which were well watered, but industry, afterwards excited by necessity, converted the very sides of the mountains into plantations and gardens. Bulwarks of masonry were constructed there to preserve the soil from being washed away by the impetuous rains and torrents, and the activity of vegetation was frequently promoted by artificial showers. This painful kind of labour gave employment to multitudes of mercenaries and slaves. But the exercise of agriculture, slight as it might be, terminated with the commencement of the Peloponnesian war. The country being left wholly unpeopled by the injudicious policy of Pericles, was annually wasted by the Spartan armies, and the farmers were forced to seek refuge within the walls of Athens. In the early part of the age of Pericles, the Athenians possessed ornamented villas in the country, but they always returned to the city in the evening.

We do not read that, in the early periods of the republic, the great men, as Miltiades, Themistocles, and Aristides, were farmers; and the heroes of its latter ages, as Iphicrates and Timotheus, chose their retreats in Thrace, the Isles of the Ægean, or the coast of Ionia. It is an old remark of Herodotus, when relating the constant superiority of his Grecian countrymen over the inhabitants of the Assyrian vales, that it has not been given by the gods to one and the same country to produce rich crops and warlike men.

With all the rudeness of the early Greeks, the imperfection of their government, the consequent insecurity of property, and their early and long continued addiction to piracy, greater advances had been made in Homer's days, in many arts conducive to conveniency and elegance of living, than might have been expected. The practice of agriculture, though limited, was carried on with regularity. Cicero, in his treatise *De Senectute*, says, that Hesiod in his poem on husbandry never mentions manure, but Homer expressly speaks of dunging land, as well as of ploughing, sowing, reaping corn, and mowing grass. The culture of the vine was also well understood, and the making of wine carried on by the different processes, with much attention and knowledge. This is clear from several circumstances mentioned by Homer, particularly the age to which vines were kept. Nestor produced some as a sacrifice eleven years old. Oil from the olive was in use, but the culture of that tree does not seem to have been extensive.

Homer is the most ancient author who has spoken expressly of gardens. He acquaints us with the various sorts of trees and plants, which were then known and cultivated, and the manner in which these gardens were disposed. In his description of the garden of Alcinous, king of Phæacia, we have, first, its size, four acres, as translated by Pope; next, its divisions, which are three—an orchard, a vineyard, and a kitchen-garden.

ORCHARD.

Close to the gates a spacious garden lies,
From storms defended in inclement skies;
Four acres was the allotted space of ground,
Fenc'd with a green enclosure all around:
Tall thriving trees confess'd the fruitful mould;
The red'ning apple ripens here to gold;
Here the blue fig with luscious juice o'erflows,
With deeper red the full pomegranate grows;
The branch here bends beneath the weighty pear,
And verdant olives flourish round the year;
The balmy spirit of the western gale
Eternal breathes on fruits untaught to fail;
Each dropping pear a following pear supplies;
On apples, apples; figs on figs arise;
The same mild season gives the blooms to blow,
The buds to harden, and the fruits to grow.

VINEYARD.

Here order'd vines in equal ranks appear
With all the united labours of the year;
Some to unload the fertile branches run,
Some dry the black'ning clusters in the sun;
Others to tread the liquid harvest join,
The foaming presses groan with floods of wine;
Here are the vines in early flower descried,
Here grapes discolour'd on the sunny side,
And there in autumn's richest purple dyed.

KITCHEN-GARDEN.

Beds of all various herbs, for ever green,
In beauteous order terminate the scene;

Two plenteous fountains the whole prospect crown'd,
This through the garden leads its streams around,
Visits each plant, and waters all the ground;
Whilst that in pipes beneath the palace flows,
And thence its current on the town bestows;
To various use their various streams they bring, &c.

From the description of the orchard, the trees do not appear to have been confusedly planted, but in a line. Homer uses the term *ἀγῶνες*, instead of *κῆποι*, in describing these gardens. Now, the former term comes from *ἀγος*, which signifies plants ranged with symmetry and order. Respecting the kitchen-garden, Homer gives us to understand that the pulse and roots were ranged in different beds or compartments, and the scholiast explains the terms used by Homer, as meaning plants ranged in order. It is clear, also, from this picture, that the Greeks then knew how to conduct and distribute running water in their gardens. The description, however, shows the slight degree of perfection to which gardening had arrived. Nothing but fruit trees or useful plants are mentioned; no mention is made of elm, of beech, of plane, or of any other trees, which in succeeding times have constituted the ornament and beauty of gardens;—no covered walks—no groves—no terraces—no flowers—no parterres. There is no evidence here of the design and arrangement of a royal garden, such as may be met with in modern times, or such as are common in our country. In the orchard the only fruits mentioned are olives, pears, apples, pomegranates, and figs. Despreaux and Goguet have imagined oranges to be meant by the phrase *Μελίαι ἀγλαὰ νοστροί*, fruits glittering to sight. But it is well known that the orange, with many other of the more delicate fruits of Asia, were unknown, or at least unproduced in Greece, for ages after the time of Homer. The apple is still common in Greece, and called *Μῆλον* still; but an orange is called *Ναγκωρί*.

Whatever improvements might be made in agriculture among the Greeks, after the days of Hesiod and Homer, it never, at any period, attained that degree of perfection which it did among the Romans. The ancient mode of life in Italy was quite different from that of the Greeks. It was almost entirely rural; and, with the exception perhaps of the Etruscans or the people of Cumæ, none of the Italian states were in any degree maritime or commercial. The soil, climate, and situation of Italy were highly favourable to the practice of every species of agriculture. Where the ground was most depressed and marshy, the meadows were stretched out for the pasturage of cattle. In the level country, the rich arable lands, such as the Campanian plains, extended in vast tracts, and produced a profusion of fruits of every kind, while on the acclivities, where the skirts of the mountains began to break out into little hills and gentle slopes, the olive and vine basked on soils famed for Messapian oil, and for wines, whose very names cheer and revive the soul. Timber of diversified kinds, and of every growth and size, were produced on the Alpine slopes, and on both sides of the central Apennines, whilst numberless streams, descending from both ranges, watered the fields, gladdened the pastures, and moistened the meads to the very brink of the sea shore.

Italy may be divided into four regions, which, like the sister Naiads of Ovid, though possessing the common features of one family, yet have each a distinctive peculiarity of face—

—Facies non omnibus una
Nec diversa tamen, qualem decet esse sororum.
Metam. lib. ii.

The first and most northern is the vale of the Po, bounded by the Alps on the north and north-west, by the Apennines on the south, and on the east by the Adriatic. This district of country extends nearly 300 miles in length, by 150, its greatest breadth. The second is the tract enclosed by the Apennines, and embracing the papal and Tuscan states. The third contains the Campania Felix and its immediate dependancies, such as the borders and the isles of the Bay of Naples and the plain of Postum. The fourth embraces Abruzzo, Apulia, Calabria, and the southern extremities of Italy. The first of these regions has been represented as perhaps one of the richest and most fertile spots in Europe. Its superabundant fertility is owing to the numberless streams which descend on either hand from the Alps and Apennines, and which furnish a constant supply to the main stream that intersects the vale in its whole length: *Fluviorum rex Eridanus*. This region is not only well watered by the multitudinous rills that meander through its lateral vales, but is also refreshed by the gales that occasionally blow down its bordering mountain slopes during the heat of summer. It is, however, sometimes visited by blasts that chill its climate, and recall the attention of its favoured inhabitants to that Alpine repository of ever during snow which rises perpetually before them. These blasts are slight indeed, but sufficient to check the growth of such plants, as, like the orange and the almond, shrink from frost, or pine away under its most mitigated aspect. The second region is protected from the blasts of the north by the intervening Apennines, and is therefore less exposed to the action of frost. Its garden fruits accordingly excel in size, richness, and flavour, those of the vale of the Po, and its orchards are graced with oranges. Still, it is not entirely unacquainted with the frosts and snows of transalpine latitudes. The third region, the Campania Felix, is that whose delicious plains have been so frequently extolled by travellers, painters, and poets, and where nature pours forth all her treasures with richest exuberance, amid ever genial gales, and under skies for ever serene. The plains of Apulia, forming the fourth region, lie east of the Apennines, including the coast of Abruzzo and Calabria, and differ from the last mentioned, merely in increased warmth and in yielding productions more characteristic of a tropical latitude, such as the aloe and the majestic palm: the mountains, however, of Apulia have been always considered as mere sheep-walks. It was the second region, comprehending Etruria and Latium, that rose first to eminence in agriculture.

At no period did the Romans cease to avail themselves of the natural fertility of their territory. If we can trust the fabulous legends of early Rome, Romulus, its reputed founder, received a rustic education, and spent his youth in hunting. His employment, when not engaged in war or the chase, was rural labour. Numa, that peaceful and superstitious legislator, divided the whole of his small territory into distinct cantons. An exact account was rendered him of the manner in which these were cultivated, and he occasionally went in person to inspect them, in order to encourage those farmers whose lands were well tilled, and

to reproach those who were less industrious. Ancus Martius, who trode in the path of his predecessor Numa, recommended to his people the assiduous cultivation of their lands.

The first Agrarian law, promulgated by Romulus, allotted to each citizen only two jugera, equal to 14 acre English, or about one Scotch acre. Pliny expressly declares, that no person was allowed a larger share: *Bina tunc jugera populo Romano erant, nullique majorem modum attribuit.*¹ Agreeably to this law, we find, that when the Romans divided the conquered lands, they gave to every hundred men 200 jugera, which 200 jugera were, from the hundred men, called *centuria*.² The term *jugerum*, is generally translated *acre*, and hence common readers are apt to suppose it implies the same quantity of land. But this is not the case. *Jugerum* is derived from *jugum*, a yoke, and signified as much land as could be ploughed in one day by a couple of oxen. The Roman *jugerum*, according to Columella, an exact judge in this matter, consisted of two measures of land, called *actus*, from *agendis bobus*, each containing a square of 120 Roman feet, which, together, made an oblong square of 240 feet by 120, denominated *quadratus actus*, the length of which multiplied by the breadth, produced 288,000 Roman square feet, being fully 6-10ths of an English acre, or scarcely half a Scotch acre. Another Agrarian law was passed in the 265th year of Rome, by Licinius the tribune, twenty-one years after the expulsion of the kings; by which seven jugera were allotted to each citizen, amounting to fully 44 English acres. After this time, the conquered lands were distributed among the citizens by assigning seven jugera to each. But although in the division of the land an equal quantity was assigned to each without distinction, yet nothing was done to prevent any one from acquiring more. When each of the soldiers had received his share of the conquered lands, the remainder was sold by the questors. The Sabine lands, as Flaccus informs us, were divided into lots of fifty jugera, by the questors, and sold to such as would purchase them.³ It is probable the Tarentine lands were disposed of in the same way. No one was prohibited from buying as much land as he could, till the law of Licinius Stolo the tribune, by which no person was allowed to hold more than five hundred jugera. This law was rigorously executed at first, and continued in force till after the time of Metellus. It was even in force in the days of the Gracchi. Still many of the greatest men Rome ever produced, as Cincinnatus, Curius Dentatus, Attilius Regulus, and Caius Fabricius, possessed no more than seven jugera.

The two jugera at first allotted to each citizen, were certainly cultivated with the spade, which we find often mentioned as an instrument of husbandry by the ancients. Even the seven jugera afterwards allotted were probably cultivated in the same way, the whole being scarcely sufficient to maintain a yoke of oxen. Attilius Regulus, in his letter from Africa to the senate, mentions two labourers on his seven jugera farm, a villicus and a hired servant. If the land had been ploughed, one certainly would have been sufficient. He mentions his rusticum instrumentum, but no oxen. It is obvious, therefore, that the small farms

¹ Nat. Hist. lib. xviii. c. 11.

² Siculus Flaccus, de Cond. Agr.

³ Id.

were cultivated with the spade, or, if ploughed, oxen must have been let out for hire.

Of all the ancients who have treated on agriculture, the Roman writers bear the pre-eminence:—these are, Cato, Varro, Virgil, Columella, Pliny, and Palladius. Columella mentions seven other writers on this subject whose writings are lost, besides forty amongst the Greeks, of whom three only survive the wreck of time, Hesiod, Xenophon, and Theophrastus. Among the Roman rustic writings now lost, are those of Tremellius Scrofa, which all who love the science must regret, not because that Columella says their author had rendered agriculture eloquent, but on account of what Varro says of his farms: "I see," says he, "Cn. Tremellius Scrofa coming hither, who is esteemed the most skilful of the Romans in agriculture, and most justly; for his farms are to many, on account of their culture, a more agreeable spectacle than the royally ornamented edifices of others."⁴ The Romans did not confine themselves to the mere practice of agriculture, but also delivered precepts on the subject, which being committed to writing, formed, as it were, a new science, and which being derived from actual experience, had an air of originality rarely exhibited in their literary productions. Such precepts were held by them in high estimation, as being founded on the observations of men who had displayed the most eminent capacity and knowledge in governing the state, in framing its laws, and commanding its armies. These precepts, which formed the works of the agricultural writers—the *Rei Rusticæ Scriptores*—are very interesting and comprehensive.⁵ The subjects they embrace are numerous; for the Romans had a much greater variety than we of grain, pulse, and roots, and besides, had vines, olives, and other plantations, which were re-

garded as profitable crops. The situation, too, and construction of a farm-house, with the necessary accommodations for slaves and workmen, the wine and oil cellars, the granaries, the repositories for preserving fruit, the poultry-yard, the aviaries, form topics of much attention and detail. These were the appurtenances of the villa rustica, or complete farm-house, which was built for the residence only of an industrious husbandman, and with a view towards profit from the employments of agriculture. As luxury increased, indeed, the villa was adapted to the accommodation of an opulent Roman citizen, and the country was resorted to rather for recreation, than for the purpose of lucrative toil. It was this more refined relish for the pleasures of the country, so keenly enjoyed by the Romans, after luxury and wealth had succeeded poverty and simplicity, that furnished the subject for the finest passages in Horace and Virgil, Lucretius and Catullus, who seem to emulate each other in the praises of a country life.

Marcus Porcius Cato wrote the earliest book on husbandry which we possess in the Latin language. This eminent person was born in the 519th year of the city. The treatise *De Re Rustica*, which now bears his name, has descended to us much mutilated, since Pliny and others allude to subjects treated of by Cato which are not to be found in any part of the work now extant. Even as far back as the time of Aulus Gellius, the work had suffered by the carelessness of copyists. In its present state, as Dunlop observes, it is merely the loose, unconnected journal of a plain farmer, expressed with rude, and sometimes with oracular brevity. According to Servius, it is addressed to the author's son, but no such address is now extant. It begins rather abruptly, and in a manner extremely characteristic of the simple manners of the author.—"It would be advantageous to seek profit from commerce, if it were not hazardous, or by usury, if that were honest; but our ancestors ordained that the thief should forfeit double the sum he had stolen, and the usurer quadruple what he had taken; whence it may be concluded, that they deemed the usurer the worst of the two. When they wished highly to praise a good man, they called him a good farmer. A merchant is zealous in pushing his fortune, but his trade is perilous, and subject to reverses. But farmers make the bravest soldiers and the stoutest men. Their gain is the most honest, the most stable, and the least exposed to envy. Those who exercise the art of agriculture are of all others least addicted to evil thoughts." The first of his rules is about the choosing of a farm, in respect of its vicinity, climate, soil, exposure, &c. On taking a farm, all the old oxen, and the cattle of delicate frame, and the old waggons, he advises to be sold off, along with the old implements of husbandry. He directs, also, the farmer to sell such of his slaves as are aged and infirm; for which inhumanity, he has incurred the just indignation of his biographer, Plutarch. Rules are given for the most assiduous labour without doors, and the most rigid economy within. After the duties of the master, come those of the villicus or farm steward, who in particular is discharged from the exercise of religious rites and consultation of augurs. While Cato enjoins the master of the family to be punctual in his devotions, he expressly forbids the rest of the family to perform any, telling them, that they were to consider that the master performed devotions for the whole family. What a contrast between his character and the character of Abra-

⁴ De Re Rust. lib. i. c. 11.

⁵ A complete edition of the *Rei Rusticæ Scriptores*—Cato, Varro, Columella, Pliny, and Palladius—was published by the learned Gesner at Leipzig, in 1735. A second edition of this valuable work was published by Ernesti, and a third by Schneider, whose edition is still more perfect than the former, as he collated the Bruchian and Aldine editions, which had not been consulted by Gesner. The treatises of Cato and Varro have been repeatedly printed by themselves and apart from those of Columella and Palladius. The chief editions of Cato are those of Rapselengius, in 1598, with the notes of the learned Meursius, and of Ausonius Popsma, in 1620. No English translation of Cato has appeared; but numerous extracts have been made from it by Dickson, in his *Husbandry of the Ancients*. An English translation of Varro, by the Rev. Mr. Owen, was published in 1800. The old writers may be compared with the more modern Italian writers on husbandry, as Crescenzo, who lived in the 12th century, Davanzati, Vittorio, and Alamanni, the last of whom, in a poem on Tuscan husbandry, has closely followed, especially in the situation and construction of a villa, the precepts of Varro, Cato, and Columella. The plough used in Alamanni's day by the peasantry in the Campagna di Roma, was of the same form as that used by the ancient Latian husbandmen, as we are informed by Boustetten in his journey to Latium, quoted by Dunlop, vol. ii. p. 12; and on the authority of Simondon's Table of Tuscan Agriculture, and Chastouviereux's Letters on Italy, many other points of resemblance may be traced. Rollin has judiciously put the question, Would it be an ungratifying and barren employment to compare the opinions of Cato, Varro, and Columella, with the modern practice? This has been done not only by the authors mentioned above, but also particularly by the late Rev. Mr. Dickson, who, in his large and laborious treatise on the Husbandry of the Ancients, has gone minutely into the subject as far as it is connected with the labours of the British farmer, and shown, that, in spite of the great difference of soil and climate, many maxims of the old Roman farmers correspond with those followed by British farmers in his day. See his work on the above subject in 2 large vols. 8vo. 1788.

ham! Both were farmers, but how contemptible does Cato appear when compared with the illustrious Syrian, who had 318 men servants, born in his own house, and Eliezer for his farm steward. We have this character given him by God himself: "For I know him, that he will command his children, and his household after him, and they shall keep the way of the Lord, to do justice and judgment." As Cato warns proprietors of land not to be rash in building villas, it is probable that the Romans in his day had begun to extend their villas considerably. He directs the proprietor to build in such a manner that the farm may not need a villa, nor the villa a farm; in other words, that there be a suitable proportion between the size of the villa and that of the farm. This maxim of Cato is also recommended by Varro, Columella, and Pliny. The two latter mention that Lucullus and Scævola had violated this golden rule—that the villa of Lucullus needed the farm, and the farm of Scævola needed the villa. Pliny observes further, that Lucullus had by his enormous villa become liable to the chastisement of the censors, as he had less trouble to plough his land than clean his house. In this case, says he, to plough less than to sweep was a foundation for the chastisement of the censors.¹ Palladius gives the same advice to landed proprietors, and says, that the size of a villa should be so regulated, that if any thing destroy it, it may be rebuilt by one, or at most by two years' rent or profits of the farm in which it is placed.² Cato is very particular in his injunctions on the subject of adapting the different kinds of crops to the soil. A field of a rich and genial soil should, he says, be sown with corn, but if wet or moist, with turnips or raddish. Figs are to be planted in chalky land, and willows in watery situations, that they may serve as twigs for tying the vines. He then goes into a detail respecting the number of labourers necessary to a farm—the implements of husbandry—and the farm offices, with the materials proper for their construction. He gives directions how to manage vines and olives, with the proper mode of planting, grafting, propping, and fencing, as also how to make and preserve the different sorts of wine and oil, and how much of each should be allowed to the servants of the family. In discoursing of the cultivation of corn fields, the farmer is enjoined to collect all sorts of weeds for manure. Pigeons' dung is preferred by Cato to that of all other animals. He gives instructions for burning lime, and for making charcoal and ashes from the branches or twigs of trees. The Romans appear to have bestowed much labour in draining their fields, and Cato advises the making of both open and covered drains. As oxen and not horses were employed in ploughing, he adds instructions how to feed them and take care of them. He mentions two sorts of ploughs—one called *Romanicum aratrum*, proper for stiff soils; the other, *Campanicum aratrum*, for light soils. Dickson³ thinks that the former had an iron share or *comer*, and the latter a piece of timber, like the Scotch plough, and a sock driven upon it. The common plough was used in the ordinary operations of ploughing, to prepare the soil for the seed. The boarded plough was used to cover the seed when sown, and sometimes immediately before sowing, to make small trenches for receiving the seed, that it might easily be

covered by harrowing, and might rise in rows for hoeing. A great part of Cato's work, as Dunlop⁴ remarks, is more appropriate to the housewife than the farmer. He gives receipts for making all sorts of cakes and puddings, fattening hens and geese, preserving figs during winter, as also medical prescriptions for curing various diseases both of men and animals. Mala punica, or pomegranates, are the chief ingredient in his remedies for the diarrhæa, dyspepsia, and strangury. Sometimes, however, his remedies are not medical, but are to be effected by sacrifices, atonements, or charms. The most curious of these charms is that for a fracture. "Take," says he, "a green reed, and slit it up the middle—throw the knife upwards, and join the two parts of the reed again, and tie it so to the place broken or disjoined, and say this charm: *Daries, Dardaries, Astartaries, Dissunapiter!* or this: *Huat, Hanat, Huat, Ista, Pista, Pista, Domiabo, Damnaustra!* This will make the part sound again."⁵ The most remarkable feature in Cato's book is its total want of arrangement. It is divided, indeed, into 162 chapters, but there is neither method nor plan in them. They are merely so many memoranda, committed to paper as they were suggested by the daily labours of the field, and seem never intended by their author to have formed a distinct treatise on agriculture.

The treatise of Varro is much more complete than that of Cato, and was composed when its author was 80 years of age, after the battle of Actium, which fixed the imperial sceptre solely in the hands of Augustus. It is not a journal, like that of Cato, but a book so exactly and methodically arranged, as to have attracted the notice of the fastidious Scaliger: "*Unicum Varroem inter Latinos habemus libris tribus De Re Rustica, qui xre ac pudentius philosophatus sit. Immo nullus est Græcorum qui tam bene inter eos saltem qui ad nos pervenerunt.*" Instead of that direct and plain simplicity which never suffered Cato to deviate in the least from his subject, the work of Varro is embellished and illustrated by much of the erudition of one who might justly be denominated *Doctissimus Romanorum*—of one who had perused 50 Greek writers on the subject. The work of Cato is that of an ancient plain country gentleman of much experience; the work of Varro is more that of a scholar than a practical farmer. Cato speaks of a country life and of farming as conducive to gain; Varro commends a country life and farming, not so much as conducive to gain, but as being favourable to temperance and other virtues, and as a shelter from evil passions, by affording that constant employment which leaves little leisure for those vices that prevail in cities, where the means and occasions for them are created and supplied. His treatise consists of three books; the first on the cultivation of land, the second of pasturage, the third *De villicis pastionibus*, or of those moderate luxuries which a plain farmer may procure independent of tillage or pasturing cattle, as the poultry of his barn yard, the trout of the stream which bounds or waters the farm, and the game, which he may enclose in parks, or chance to take on days of recreation. If other agricultural writers, as Palladius and Columella, have discussed more minutely the construction of the villa itself, it is to Varro that we are

¹ Nat. Hist. lib. xviii. c. 7.

² Lib. i. tit. 8.

³ Vol. i. p. 376.

⁴ Vol. ii. p. 30.

⁵ See Dunlop, vol. ii. p. 21.

chiefly indebted for our knowledge of the appendages to it, as rabbit-warrens, aviaries, and fishponds. The succeeding writers on agriculture are, Columella, who flourished in the time of Claudius Cæsar; Palladius, who lived in the fourth century; and Pliny, who has treated the subject at great length in the eighteenth book of his Natural History.

The Romans recommended that the villa or farm house should be placed at the foot of a well-wooded hill, and open to the healthful breeze; not in a hollow valley, as being there exposed to storms and inundations; nor in front of a stream, which situation would be cold in winter and unwholesome in summer. In order to enjoy the sun in winter and the shade in summer, Varro directs that the villa should front the east, and Palladius, the south-east. Pliny says, that in warm climates the villa should front the north; in cold climates, the south; and in temperate climates, the east. It must be remembered, that the term villa, originally applying simply to a farm-house and its offices, was, in the days of Varro and Columella, applied to the country residence of an opulent Roman gentleman; and it is a villa of this kind which Columella describes. The villa, according to Columella, contained three divisions—the *urbana*, the *rustica*, and the *fructuaria*. The *urbana* was the residence of the proprietor himself, and contained dining-rooms, parlours, bedchambers, baths, tennis courts, walks, terraces, &c. adapted to the different seasons of the year. The *rustica* contained the kitchen, the houses of the slaves and workmen, stables, &c.; the *fructuaria* contained the wine and oil cellars, corn yards, barns, granaries, storehouses, hay-lofts, and repositories for keeping fruits. In every villa there was a tower, in the upper part of which was a supping room (*cenatio*) where the guests might enjoy at the same time a pleasing prospect. Adjoining to the *rustica* were places for keeping hens, geese, ducks, and wild fowls, birds, dormica, swine, warrens, and even snails. There was appended to the villa a park or paradise of fifty jugera, or more, for enclosing deer and wild beasts, and a fish pond, and sometimes an oyster bed.

In the early times of Rome, the operations of agriculture were carried on entirely by the proprietors themselves, as already observed. But in process of time, when rich men grew numerous, and were allowed to possess large estates, farming fell into different hands. These were either professed farmers or servants. The servants were divided into the two classes of free servants (*coloni*) and slaves (*servi*). In the time of the Elder Pliny, it was the common practice to cultivate the land by slaves, and by such even as had been stigmatized with marks of ignominy for their crimes.⁷ There were some, however, who had no slaves, but let their estates to farmers. The stock on the farm belonged to the landlord, and the farmer received a certain proportion of its produce for his labour. *Agricola* was a general term, including not only those who came strictly under the appellation of *aratores* or ploughmen, but also shepherds and those who reared vines or trees. The *aratores* were those who cultivated the public grounds of the Roman people, and paid tithes for them. The farmer who shared the produce with the landlord was called *partarius*, and *politor* or *po-*

litor, because he dressed the land. The former appellation was given to shepherds, or to any one who shared with another the fruits of his industry. Cato and Virgil⁸ call the class who farmed their own grounds, *coloni*. But the appellation *coloni* is generally synonymous with *agricola*.⁹ In Columella's time, the *colonus* meant the same thing as the tenant or farmer with us, who was always free, and distinguished from the *villicus* or farm steward, who was usually a slave or freedman.

That the *politor* was at no expense in cultivating the land, is evident from the small share of the produce which he received. "The terms," says Cato, "on which land ought to be let to a *politor* are these:—In the good land of Cassinum and Venafrum, he receives the eighth basket; in the second kind of land, he receives the seventh basket; in the third, he gets the sixth. In this last kind, when the grain is divided by the *modius*, he receives the fifth part; in the very best kind of land about Venafrum, when divided by the basket, he gets only the ninth. If the landlord and *politor* husk the *far* (spelt) in common, the *politor* receives the same proportion after as before: of barley and beans, divided by the *modius*, he receives a fifth." Here we have in the best land one-ninth of the thrashed crop allowed to the *politor*, and in the third or worst sort, one-fifth. In Egypt, when by the regulation of Joseph all the land but that of the priesthood became royal property, the tenant received 4-5ths of the crop, only 1-5th being reserved for the monarch. But in that case the royal proprietor was at no expense, and what he received was the rent of the land. In our country the case is quite different, where land is sometimes let on the same footing as it was to the Roman *politor*. But instead of 1-6th in the ear, the British farmer receives 3-5ths of the crop, whilst rent and tithe together make up the other 2-5ths. We are told by Columella, that one yoke of oxen and one ploughman were sufficient to cultivate as much land as would require for seed a hundred and twenty-five *modii* of triticum, as many of pulse, and seventy-five *modii* of spring corn. This, allowing five *modii* to the jugerum, makes a total of sixty-five jugera, or twenty-five jugera of triticum, twenty-five of pulse, and fifteen of spring corn. Now, subtracting the 25 jugera of pulse as necessary to support the labouring cattle, there remain 40 jugera of triticum and spring corn, upon which, at the rate of five *modii* to the jugerum, 200 *modii* would be sown, and which, supposing the seed to yield tenfold, would produce two thousand *modii*; one-fifth of this, the *politor's* share, would amount to four hundred *modii*, equal to 424 English pecks, or 402 Scotch pecks. Calculating the price of wheat at twelve sesterili, or 2s. per *modium*, as it was in the days of Columella, 400 *modii* would produce £40 sterling; or, calculating it according to British measure, at the rate of £3:2:2½ the quarter, and £1:11:9½ per boll, it would amount to about £41. But in the days of Varro, when wheat sold at from 12s. 6d. to £1:0:8½ per quarter, the share of the *politor* would not bring above one-third of that, even supposing it to sell at the latter of these prices. The *politor*, of course, would not have above £13:13s. sterling for his share of the crop.

⁸ De Re Rustica, c. 1. Virg. Ecol. ix. 4.
⁹ Non dominus sed colonus.—Senec. 1. pist. 83.

⁶ Pliny, Epist. 2.

⁷ Nat. Hist. lib. xviii. c. 4.

Columella makes the proportion of labourers to ploughmen very great. To a farm of two hundred jugera, or about a hundred and twenty English acres, he assigns two ploughmen and six common labourers, or three labourers to one ploughman; and says farther, that this is the proportion where there are no trees; but that if the farm is an *arbutum* (orchard) three more labourers are necessary. If the politor, therefore, in a farm of sixty-five jugera was obliged to keep three servants, the proportion of the crop above stated must appear insufficient for his maintenance. It is probable, however, that he had considerable perquisites of milk, fruit, and garden-stuffs produced by his farm, sufficient to supply his family, and that on every farm there was grass for some cows, goats, or sheep. If these things be considered, the politor had what was sufficient, with his share of the crop, for his own maintenance and that of his servants. Or, if he had only a garden, with a small vineyard, and some olive trees in the fields, he might have only two servants, as Mr. Dickson has calculated from a long passage in Columella. But after all, it will probably be thought that a fifth share of the produce was but a sorry maintenance to a Roman farmer, compared with what is enjoyed by a British farmer. The politor cannot, however, be considered as a real farmer, for no stock was required of him, and no more knowledge than was necessary for a common labourer, as he seems to have been entirely under the guidance of the proprietor with respect to the method of culture.

The *coloni*, or free farmers mentioned by Columella, were in a very different situation from the *politores* of Cato, and seem to have paid rent for their farms, in the same manner as the British farmers. This is clear from a long passage in Columella, where he advises landlords not to be too rigorous in exacting their rents, and at the same time not to neglect demanding them, because good debts become bad ones when not called for. The cattle also were theirs, and they were bound to give a particular culture to their lands. It may be here observed, that the Romans gave leases only for five years, or during a *lustrum*.¹ The other kind of servants, both free and slaves, have been mentioned. In every farm not managed by the proprietor, there was an overseer or farm steward; and Cato and Columella are both very particular in their directions respecting him. "An overseer," says Columella, "may do very well though he be illiterate." Cornelius Celsus adds: "In that case, he will bring money to his master oftener than his book, because, being ignorant of letters, he is the less capable to contrive accounts, and is afraid to trust another, being conscious of fraud."² How a person could manage a farm for another without a knowledge of arithmetic or keeping accounts, is difficult to comprehend. Such illiberal maxims remind us of those politicians who consider it a dangerous thing to teach the common people to write, lest they should thereby be enabled to forge bills and bank notes. Respecting the qualifications of the other servants, Columella recommends that the ploughman be a tall stout fellow, with a harsh voice and manner, to terrify the oxen. He allows the common labourer may be of any size, provided he be able to stand fatigue. "Vineyards," says

he, "do not require such tall men as the plough. It is enough that they be thick and brawny, as this constitution of body fits them for digging, pruning, and the other culture necessary for vines."

It is not easy to determine the value of agricultural labour among the Romans, as there is not the least hint given in the rustic writers as to the wages farm servants received. The only way in which we can approach the truth, is by ascertaining the price of slaves, and the expense of their maintenance. The price of a slave vine-dresser in Columella's time, was 8000 sesterces, (£64: 11: 8, or, by another computation, £66: 13: 4.) According to Plutarch, Cato never paid more for a slave than 1,500 drachmas, (£50.) As more than a century and a half intervened between the days of Cato and Columella, the value of £50 was much higher in the time of Cato than £66: 13: 4 in the age of Columella, which proves that the number of slaves was much greater in Italy in Columella's day than in Cato's. The price of a slave labourer mentioned by Columella, is eight times the value of a jugerum of land. Land fit for vines is estimated by the same writer at 1000 sesterces (£8: 1: 5) or £8: 6: 8. the jugerum equal to £13: 9: 8 for the English acre, and £16: 19: 5 for the Scotch acre. Now, if a vine dresser cost so much, a good ploughman or common labourer would not cost less than £60 sterling. The common interest given for land was 6 per cent. in Columella's time; but, as a slave is a perishable commodity, and liable to accidents, the interest of the price of a slave cannot be rated at less than 12 per cent.: so that a slave that cost £60 of original price, must be considered as an annual expense of £7: 4s. besides clothing and maintenance. In Cato's time, the overseer was allowed 3 lbs. *avordupois* or 3 lbs. 12 ounces of bread daily, according to the severity of the labour. "During the winter," says he, "the overseer should have 4 modii of wheat each month, and during the summer months 4 modii, and the villica, or overseer's wife, and the shepherd, should have 3 modii. During the winter, the slaves should have 4 lbs. of bread each in the day; from the time that they begin to dig the vineyard to the ripening of the figs, they should have 5 lbs. each, after which they should return again to 4." The Roman lb. was only equal to 12 ounces *avordupois*. To this bread was added a daily allowance of wine. During the three months that followed the vintage, the servants drank a weak kind of wine called *lora*, the mode of making which is described by Pliny and Columella. It may be reckoned equivalent in quality to the small beer given to servants in this country. Besides the *lora*, each slave was allowed 10 quadrants of wine annually, or 74 gallons English, or, at an average, nearly 2½ English pints daily. In addition to bread and wine, the slaves got what was called *pulmentarium*. For the purpose of serving as *pulmentarium*, Cato recommends the laying up of as many fallen olives as can be gathered, and also those early olives from which the smallest quantity of oil is expected. When these are finished, he orders salt fish and vinegar to be given, and besides these, to each man a sextarius of oil (a mutchkin and a half Scotch) in the month, and a modius of salt in the year. Respecting the clothing of the slaves, Cato gives the following directions. "The vestments of the family, a coat and a gown, 3½ feet long, should be given once

¹ Lib. i. c. 7.

² Pliny, Epist. lib. ix. 37.

³ Lib. i. c. 8.

in two years; whenever you give a coat or a gown, first receive the old one; of it make *centones*. Good shoes should be given once in two years." Columella says, that the overseer should have the family dressed and clothed rather usefully than nicely, and carefully fortified against the wind, cold, and rain, all which they will be secured from by leathern coats, old *centones* for covering their heads, or cloaks with hoods: if the labourers are clothed with these, no day is so stormy as to prevent them from working without doors.⁴ It is difficult to say what the *centones* were; whether old bedclothes worn out, as the phrase in Columella, *confecti centones*, seems to mean, or made up of some coarse woollen stuffs, like the bed coverings themselves.

Lands were divided by the Roman rustic writers into champaign, hilly, and mountainous; or lands not exactly on a level, but a little declining; hilly lands gently rising; and mountainous lands, high and rugged, provided they be covered with trees and grass. Cato, Varro, and Pliny, reckon the best situated land to be that at the foot of a mountain with a southern exposure. The free soil was reckoned most proper for vines, and the stiff for corn. The fat free soil is esteemed first rate land by Columella; fat stiff soil, second rate; stiff and lean soil, third rate; and stiff lean dry soil is the fourth rate or worst soil. The qualities ascribed to the best soil are, that it be blackish, (*terra nigra vel pulla*;) ⁵ glutinous when wet; ⁶ be easily crumbled when dry; have an agreeable smell and a certain sweetness; ⁷ imbibe water; ⁸ retain a proper quantity of moisture, and discharge a superfluity; ⁹ when ploughed, exhale mists and flying smoke, not hurting the plough irons with salt rust; the ploughman followed by rocks and other ominous birds; and when at rest, carrying a thick grassy turf.¹⁰ Land for tillage was called *arvum*, and ground for pasture *pascuum*. In Cato's time, vineyards paid best; second, gardens; third, willow groves; fourth, olive plantations; fifth, meadows; sixth, corn fields; seventh, woods that grow up again after they are cut; eighth, fields planted with trees for vines; and lastly, a wood for masts. In the time of Varro circumstances had changed respecting vineyards, as he declares meadows to pay best. Columella agrees with Cato in giving the preference to vines. It was an established maxim with the Romans that farms should be kept within moderate bounds; also that farmers should sow less and plough better. Columella advises those who buy land not to buy more than they are able for, and approves of the maxim of the Carthaginians, whom he calls a very acute nation, that the land ought to be weaker than the husbandman, for when they struggle together, should the farm prevail, the master must be ruined. Palladius mentions another maxim of the ancients: "A small farm cultivated is more productive than a large farm neglected." We have the following general maxims from Pliny, handed down from the ancient Romans:—"He is a naughty farmer who buys what his farm can produce to him: a bad master of a family who does in the daytime what he may do at night, except in the case of a storm; a worse who does on common days what is lawful on holy

days; the worst of all, who, on a good day is employed more within doors than in the fields."

Respecting the succession of crops, among the Romans, Pliny tells us, that on the best soil the following was the ordinary course: barley, millet, radishes, and then barley again, or wheat, as in Campania. In this succession of crops no fallow intervened. For one of these crops the land was dunged, probably, as Dickson thinks, for the millet, as to this dung was always applied. A crop of far (spelt) and beans was alternately raised on very rich soils. Land capable of being cropped in this manner was not common, and was found chiefly in Campania, the most fertile tract in Italy. On a somewhat less rich land, the rotation was a crop of corn, a crop of beans, and a crop of pulse. A third soil was cropped two years successively, and rested the third; yet the ordinary mode pursued by the Romans seems to have been to crop and fallow alternately. It is observed by Columella, that the olive tree carries a good crop only once in two years. For this reason the husbandman is directed to divide his olive plantation into two parts, which might produce crops alternately, and thereby secure him in a good crop annually. It was also very common to have vines in their corn fields, or *vice versa*, corn in their vineyards. The *arbutum* was a field planted with elms for supporting vines, and which had corn sown between the rows at certain distances. This practice of having two crops on the same field—a crop of corn or pulse, and a crop of olives or vines—would naturally lead the Roman farmers to fallow every other year. Far and siligo, says Columella, require land that is fallowed, and carries a crop alternately. It is a general direction given by Virgil to allow the corn fields to lie fallow after every crop.

Rest by alternate fallows wearied earth,
And gradual fit the soil for future birth.

Sotheby, l. 89, 90.

This direction of Virgil is cited and recommended by Pliny. On every farm a great quantity of pulse was sown, some of which was cut green for the labouring cattle in May and the beginning of June. As these crops, particularly when cut green, did little or no hurt to the soil, good crops of corn were expected to succeed them, and therefore it was common to sow corn after pulse.

It may be remarked, that the practice of sowing wheats and beans alternately, as recommended by Pliny, on good land, has been tried in Scotland on some of our rich soils, in a constant rotation; but it was found, after ten or twelve years' practice, not to succeed, as the couch or quick grass was so much encouraged, and the land became so foul, as to render fallowing absolutely necessary. This is owing to the nature of our climate. In Italy the wheat and beans were reaped and housed in June, which put it in the farmer's power to give his land some ploughing in dry weather for each crop, by which means roots and weeds in that climate were effectually prevented from becoming hurtful. But in our climate neither wheat nor beans are housed till the middle of September, so that no ploughing can be given in the proper season for destroying couch grass.

The Romans were well acquainted with the use of manure, its various kinds and properties, and its application to the different sorts of land and seed. This last they considered as one of

⁴ Lib. l. c. 8. ⁵ Virg. Georg. lib. ii. l. 303.
⁶ Lib. 248. ⁷ Lib. 238. ⁸ Pliny, lib. xvii. c. 5.
⁹ Id. ¹⁰ Virg. Georg. lib. i. l. 317.

the principal operations of agriculture, and placed it next to ploughing. *Quid est agrum bene colere?* says Cato. *Bene arare. Quid secundum, arare?* Tertio, *Stercorare*.¹ The Romans carefully gathered the dung of their cattle, and littered them with straw or stubble, which was carried with the dung to the dunghill. "Those men," says Columella, "are not diligent who from each of their lesser cattle have not a load of dung in thirty days, and ten loads from each of the larger cattle, and as many from each of the men, who may collect not only what they make themselves, but also that which is produced by the court-yard and house." Not only were vegetable and animal substances used for enriching land, but also earths of different qualities were used for the same end. Respecting animal substances, the dung of pigeons was esteemed best for manure, human dung next, and then that of cattle. Every farm had two dunghills, one for receiving the dung for the offices, the other for preparing it to be carried out to the corn fields and vineyards. The manure was laid out on the land twice a year, in autumn and summer. The quantity required for a jugerum was from eighteen to twenty-four loads, each load containing eighty modii, so that in the proportion of eighteen loads to a jugerum, five modii were spread on every square of ten feet. The quantity of eighteen loads to the jugerum is nearly in the proportion of 600 Winchester bushels to the English acre, and 737 firlots Linlithgow measure to the Scotch acre. If twenty-four loads to the jugerum, then this is nearly in the proportion of 800 Winchester bushels to the English acre, and 983 firlots to the Scotch acre. These quantities, according to Dickson, are sufficient for light soils—the kind most common in Italy—if the quality of the manure be good. It was a rule with the Roman agriculturists, that dung be ploughed in as soon as it is spread, lest it be dried by the heat of the sun, and lose its strength by exhalation. In our humid climate, it is in more danger from rain than from solar heat. It was the Roman practice to dung the land in the wane of the moon, whether in autumn or winter; and rather to dung often than much at a time, taking care that the manure should be well broken and made small in spreading. Wet and cold land they considered, required more dung than warm and dry land; and sloping land more than level land. It was also a common practice with the Roman farmers to fold sheep upon land intended for the plough, that it might have the benefit of their dung. In Britain, buck wheat, clover, pease, and other pulse, are sometimes sown to be ploughed in for manure. This custom we have received from the ancients, among whom it was very common. Beans were commonly used by the Greeks for this end; and Theophrastus, in his *History of Plants*,² tells us, that the farmers in Macedonia and Thessaly ploughed them in when in the flower. Instead of beans, the Romans commonly used lupines. In Pliny's opinion, lupines, beans, and vetches, made the land better, and *cicer*, barley, fenugreek, and ervile, hurt the land. The ancients also used the ashes of useless vegetables, shrubs, and branches, and even trees, for manuring land. Directions for burning all these are given by Cato, Palladius, Vir-

gil, Columella, and Pliny. Virgil recommends to burn the soil itself, before the ground is ploughed, and to burn the stubble after the corn is taken off the arable land. He bids the swains, after this process of burning and ploughing the soil, to pray for winter dust and summer rain. We all know how valuable March dust is esteemed by our farmers; and Virgil's prayer is adopted by the modern Tuscans at this day. Lime was well known to the Romans, though it was not used as manure till the days of Pliny. Palladius mentions the different kinds of stones that were used for lime. "We make lime," says he, "of a hard white stone, or Tiburtine or dove-coloured river stone, or a red or porous stone, or, lastly, of marble. That which is made of solid hard stone is best for building, but that which is made of the soft and porous is best for plaster. One part of lime is mixed with two of sand. If to the river sand be added a third part of shell sand, the work is made remarkably firm." Cato directs how a lime-kiln should be made, and how lime should be burned.³ But the method of burning lime in Britain is very different from the mode described by Cato in the passage referred to. Here the limestone is mixed with the fuel, whilst in Italy the fuel was placed below and the limestone above. It is natural to suppose, that in the first attempt to burn lime, the stone would be put into a fire, or the stone and fuel would be mixed together. The Roman method would, of course, be an improvement. But probably as wood was used, it was impossible to do otherwise; and therefore when wood is used for the fuel, it is best to keep it separate from the limestone, and when coal is used to mix them. It appears from Pliny, that the Gauls in some parts of the country used lime with success as a manure for their corn fields. In Italy, in his day, it was found to be very beneficial to vines and olives, and also when applied to the roots of cherry trees, to hasten the ripening of the fruit. It does not appear, however, to have agreed with their soils and climates so well as with ours, else we would have heard more of it from their writers on agriculture. The early Romans were acquainted with the use of marl as manure. It does not appear, however, that they found any kind of marls in Italy. The marls which Pliny describes, and their different qualities as manures, belonged to Gaul and Britain, and some of them are common in Scotland.

The Romans used both open and covered drains for removing water from their lands, the former in their stiff soils, and in loose soils both of them. These drains were made to shelve like our ditches; and when the soil was very loose, and the drains open, Pliny tells us, that they were sometimes planted with hedges, the roots of which were calculated to prevent the earth from falling down. The covered drains, when designed to convey water from the pits made for olive trees, were, as Cato says, four feet deep, and when in the corn fields, three feet deep. Those of four feet deep were three feet wide at the top, and a foot and a quarter at the bottom. When three feet deep, they were wide at the top, and shelved in the same proportion. They were filled half way up with small stones and gravel, and if none of these could be got, with willow poles; if none of these, with twisted twigs, or even with straw. Above

¹ Cato, c. 61.² Lib. ii. c. 15.³ Lib. viii. c. 9.

4 Lib. i. tit. 10.

5 Cato, c. 38.

these earth was laid, deep enough for being ploughed. Both ends of drains were fortified with little bridges of stone—a stone on each side for pillars, and one laid over for the top. In their attention to draining, the Romans seem not to be surpassed by our modern farmers.

The Roman plough has been already mentioned. Its chief parts were, *temo*, the beam to which the *jugum* or yoke was fastened; *stiva*, the handle, on the end of which was a cross bar, called *manicula vel capulus*, which the ploughman took hold of, and by it directed the ploughshare; *cutter*, much the same with our *coulter*; *vomer*, the share; *ralla*, the plough-staff used for cleaning the share; *buris*, a crooked piece of wood going between the beam and the share, hence called by Virgil *aratrum curvam*, the crooked plough, and represented by him as a principal part of the plough, to which there seems to be nothing exactly answerable in modern ploughs. To this was fitted the share beam, *dentale*, a piece of timber on which the share was fixed, called by Virgil *duplici dentalia dorso*, i. e. *lato*, and by Varro, *dens*. To the *buris* were also fixed two *aures*, supposed to have served in place of our mould boards or earth boards, by which the furrow is enlarged and the earth thrown back. The other agricultural instruments used by the Romans were, *ligo* or *pala*, the spade, used chiefly in the gardens or vineyards; *sarculum*, a kind of hoe or weeding hook; *bidens*, a kind of hoe or drag, with two hooked iron teeth for breaking clods and drawing up the earth around the plants; a prong; *occa* or *crates dentata*, *irpex*, the harrow, a plank with several teeth, drawn by oxen as a wain, to pull roots out of the earth; the mattock or hand hoe, for cutting out weeds; *marra*, the adze, with its edge athwart the handle; *dolabra*, the axe or *securis*, with its edge parallel to the handle, sometimes joined in one, hence called *securis dolabrata*, used not only in vineyards, but in corn fields for cutting roots of trees; and *falsx*, the pruning-knife, used for pruning vines. It may here be observed, that the *pala* differed from the *ligo* in this, that it was pointed like that kind of spade which we use in digging turf or peat. Mr. Dickson, who was not only well acquainted with the Greek and Roman classics, but also an eminent agriculturist, speaking of the *aratrum* or Roman plough, observes: "We are not so well acquainted with the construction of the ancient ploughs, as to make a just comparison; I shall only say, that in the few passages in the rustic writers concerning them, it appears, that the ancients had all the different kinds of ploughs that we have at present in Europe, though perhaps not so exactly constructed. They had ploughs without mould boards, and ploughs with them; ploughs without coulters, and with them; ploughs without wheels, and with wheels; broad pointed shares, and narrow pointed shares; they had even, what I have not yet met with among the moderns, shares with not only sharp sides and points, but also with high raised cutting tops. Were we well acquainted with the construction of all of these, it would perhaps be found that the improvements made by the moderns in this article are not so great as many persons are apt to imagine." It is but fair, however, to remark, that several important improvements have been

made in the construction of ploughs, since the publication of Mr. Dickson's book in 1788.

In ploughing, it was a maxim with the Romans never to touch wet land, nor land that was wet above but dry below. It was their practice to make their furrows equal and straight. A ploughman who ploughed crooked was said to *prevaricare*; "from whence," says Pliny, "was this crime translated into the forum, but that it ought to be as much guarded against in the fields where first observed." To break and divide the soil, the furrows were made so narrow that it could not be known where the plough had gone, especially in a field which had been frequently ploughed. In this way, says Columella, the soil is not only divided, but all the roots of the weeds are cut and destroyed.⁵ The ploughman was directed to leave none of the soil unmoved, no fast-land or baulks (*scamna*) between furrows. By this method of ploughing, it was not possible for the farmer to know whether or not his land was equally moved to the proper depth, unless by pushing a pole into the ploughed land in a variety of places. Columella and Palladius both observe, that if this be frequently done, the ploughman will not venture to deceive his master. The Roman plough was sometimes so formed, that, when held upright, it stirred the ground without turning it aside. In order to reduce the mould completely, cross ploughing was recommended and practised. This is evident from Virgil:—

Et qui prociſeo quæ ſuſcitât æquore terga
Rurſus in obliquum verſo perſumpit aratro.
Georg. lib. l. i. 97—8.

Plough o'er and o'er, on toll redoubting toil,
With ſidelong furrow, croſs the furrow'd ſoil.
Sotherby, lib. l. 117—18.

Columella, Pliny, and Palladius, give the same precept. Sidelong ploughing was recommended on hilly ground, as being much easier for the oxen and ploughman. The Roman ploughers did not go round when they came to the end of the field, as ours do, but returned in the same track, and by sloping their ploughs to the right and left alternately turned the earth always one way. When they meant to stir the mould without turning it aside, the plough was held erect, and when they intended to make an open furrow, it was held obliquely, and the earth was thus turned aside. On no occasion did the Roman ploughman plough in ridges, except when he ploughed in seed, or ploughed immediately before sowing—a proof this, that he returned always in the same track, and turned the earth one way. The ridges formed by the oblique mode of holding the plough were called *sulci*, a term which denotes not only the trench made by the plough, but also the earth thrown up by it.

To what depth the Romans ploughed is uncertain. Pliny calls ploughing the land four fingers or three inches deep, mere scratching the surface. That they ploughed very deep is clear from Columella, who, in treating of the qualities of good soil, says: "Nor ought we to content ourselves with viewing the surface, but the quality of the matter below should be diligently explored, whether or not it be earthy. It is sufficient for corn if the land is equally good two feet deep." Fallow land

was generally ploughed in the spring and autumn; dry and rich land in winter; wet and stiff ground chiefly in summer; hence that is called the best land—*Bis quæ solem, bis frigora sensit*—which has been twice ploughed during summer and twice during winter.¹ It was also the Roman practice not to plough light shallow soil till September, after the summer heats, because these heats dry up the thin soils, and draw the sap from the seeds that are to be sown. Four ploughings were given annually to the fallow grounds. In wet lands the first ploughing was given in April; the second in June; the third in the end of August, or beginning of September; and the seed furrow in October. In dry sloping lands, the first ploughing was given in February; the second from the middle of April to the summer solstice; the third about the autumnal equinox; and the seed furrow in October or November. In the time of Varro, however, only three ploughings were given, or two and the seed furrow. The same was the case in the days of Pliny. That the Romans at one period ploughed four times annually may be inferred from the number of gods presiding over agriculture, who were invoked at the feast of Ceres or the harvest home. Of these there were no less than twelve, four of which, from their names, appear to have presided over four different ploughings. *Vervactor* presided over the first ploughing, when the land was made *verectum* or fallow; *Reparator*, over the cross ploughing, when the land was prepared a second time; *Imporcitor*, over the third ploughing, when the field was ridged; and *Obarator*, over the fourth ploughing, when the seed was ploughed in.² Thus the order in which the rural deities were invoked points out the order of the four ploughings.

One yoke of oxen were commonly put to the plough, and the person who held the plough also drove the oxen. Cato assigned three pair of oxen and three ploughmen to 240 jugera of olive-yard, and one ploughman and a pair of oxen to 100 jugera of vineyard.³ Consequently, when Varro observes that Cato judged a pair of oxen sufficient for 80 jugera, and remarked in his writings that a yoke of these animals was sufficient for 100 jugera, he had a reference to the olive-yard and vineyard. The same seems to have been the practice of the Greeks, if we may judge from Homer. He compares the two Ajaxes to two oxen joined together, and labouring at the plough.⁴ But though it was common to have a pair of oxen to one plough, yet sometimes there were more. Pliny mentions four yoke in some parts of Italy. After describing the manner of ploughing and sowing in Egypt, and on the banks of the Euphrates and Tigris, he adds: "Likewise they plough in Syria with a very shallow furrow, when in many places of Italy eight oxen labour hard at one plough."⁵ As it was common, however, to have only one yoke of oxen in one plough, and only one man to drive the plough and guide the oxen, it became necessary to have the animals well trained. All the rustic writers are particular on this subject. Virgil recommends that the young oxen should be trained very early to draw the plough.

If labour claim, the calves, yet docile, train
To bear the burden, and the yoke sustain;
First with loose wreath of pliant osier deck,
And hang the easy circle round their neck;
But when the steers, accustom'd to thy sway,
Yield their free strength and willingly obey,
The well-match'd couple in their collars place,
And balance, step by step, their equal pace;
Or let them draw, unforced, the empty wain,
That lightly marks the level of the plain;
Then, yoked to brazen poles, their vigour goad,
While beechen axes groan beneath the load,

Sotheby's Georgics, lib. 203—14.

"When any person," says Varro, "buys young bullocks, if he put their necks between forked stakes, set one up from each bullock, and give them meat from the hand, they will become tractable in a few days. Then, that they may be gradually accustomed to the yoke, let an untrained one be joined with a veteran, for he will be easily trained by imitating; and first let them go upon even ground, and without a plough; then yoked to a light plough, in sand or light soil. That they may be trained to carriages, they should be first put to empty carts, and driven, if convenient, through a town or village; the habit of hearing frequent noise, and seeing a variety of objects, will soon make them fit for use."⁶ The fork above mentioned was a forked piece of timber, resembling a yoke, raised above the stalls, and fixed to a beam seven feet from the ground. Into this the neck of the bullock was fixed, in the same way as in the yoke. Columella is more particular on this subject than either Virgil or Varro.⁷ The oxen were sometimes yoked by the horns, and sometimes by the neck. The latter mode is preferred by Columella and Palladius; and Pliny seems to be of the same opinion, as more strength can be exerted with greater ease by the neck and breast than by the horns. In ploughing, the oxen were not allowed to go a great way without turning. 120 feet was the length of a furrow, and farther than this it was thought improper for them to pull hard without stopping. It is probable, that the breaks of the different kinds of corn and pulse were laid out nearly of this length and breadth, though in the sowing, numbers of these might be joined together. All the rustic writers describe the furrow of the same length, 120 feet. "The length of the furrow," says Pliny, "that oxen make in ploughing at once without stopping is called *actus*; this is 120 feet. This squared and doubled in length makes a *jugerum*."⁸ Oxen were treated with great tenderness, not only when in the plough, but also after they were unyoked. "When the ploughman," says Columella, "has unyoked his oxen, he must rub them after they are tied up, press their backs with his hands, pull up their hides, and not suffer them to stick to their bodies, for this is a disease that is very destructive to work-cattle. He ought to rub hard their necks, and if they are very warm pour wine into their jaws. Two sextaries (three English pints) are sufficient for each ox; but before they are led to their stalls, it is necessary that they have ceased from sweating and high-breathing. Though they can eat immediately, yet it is not proper to give them much food, or the whole of what is intended for them, but only a part, and that by degrees; and when they have ate up what is given them, they ought to be led to the water, and encouraged by

¹ Pliny, lib. xviii. and Georg. lib. i. l. 43.

² See Fabius Victor, as quoted by Servius.

³ Cato, cap. 10.

⁴ Iliad, xii.

⁵ Plin. lib. xviii. c. 13.

⁶ Varr. De Re Rustica, lib. i. c. 20.

⁷ Col. lib. vi. c. 6.

⁸ Plin. lib. xviii. c. 3.

whistling to drink plentifully; and when at length they are brought back, they must receive what is considered sufficient for them."⁹ The rustic writers are very particular in their directions respecting the buying of oxen; but as they considered them solely as beasts of labour, the properties which they esteemed in them were very different from those held by modern farmers, who rear them merely for the butcher.

The seed, which was measured in a basket, (*satoria*, seu *corbis trimodia*, because it contained three modii or pecks,) was scattered by the hand; and that it might be done equally, the hand always kept time with the step. The sowing was either performed above furrow (*in lira*) or below it (*sub sulco*). The seed was sown on a plain surface, and then ploughed in, so that it rose in rows, and admitted the operation of hoeing. It was sometimes covered with rakes and harrows. The principal seed-time, especially for wheat and barley, was from the autumnal equinox to the winter solstice.¹⁰ This may seem strange to us, it being our custom to sow barley in spring. But in warmer climates it is sown at the latter end of the year, whence it happens that their barley harvest is much sooner than their wheat harvest. Thus in the book of Exodus we find that the flax and the barley were destroyed by the hail, because the barley was in the ear, and the flax was in seed, but the wheat and rye escaped, because they were not yet come up.¹¹ According to Columella, the wheat seed-time continued from the 22d of October to the winter solstice; yet he says it may commence at the beginning of October in wet and cold climates; and he informs us, that prudent husbandmen reckoned it injudicious to sow for 15 days before the solstice.¹² The Romans sowed also in the spring; this was called the trimestrian seed-time, and was finished in the month of March. To this seed-time they had recourse, according to Cato and Columella, only in cases of necessity, because in warm climates, when the seed is sown after winter, the drought of the spring months checks the growth, and the crop is endangered; whereas in the autumnal sowing, before the drought and heat of the spring come on, the corn is far advanced, the surface is covered, and the drought kept out.

The Romans were very careful in adapting their seed to the soil; and none of the ancient nations who practised agriculture paid greater attention to the quality of the seed to be sown than they. Only the heaviest and best of the grain was used for this purpose; and old seed was rejected, because of its supposed tendency to degenerate. According to Pliny, seed one year old is best; if two years old, not so good; and if more than three years old, it is barren.¹³ By seed of a year old is meant the seed of the preceding crop.

One would imagine, when the land was so frequently fallowed in the Roman husbandry, that there would be very little necessity for weeding; and yet the care of the Roman farmers in this was equal, if not superior, to their care in every other thing. They used two modes of destroying weeds—the one called *sarcling*, *sarculatio* or *sarritio*, and the other *runcatio*, which latter was performed by pulling the

weeds with the hand, or cutting them with a hook. *Sarcling* means hoeing. There were two methods of doing this. By the one mode, the surface was not only stirred, but the earth was also heaped up around the plants, so as sometimes to cover them. By the other, which was called plain smooth *sarcling*, the surface only was stirred. Columella¹⁴ directs, that weeding be not done while the corn is in the flower; but either before or after; and he observes that the proper time for weeding is the month of May at its commencement. Not only were wheat and barley weeded, but also several kinds of pulse. The practice of going amongst the growing corn for the purpose of weeding is justly condemned by intelligent modern farmers, as hurtful to the crop. But in the Roman husbandry, the corn was sown in such a manner as to allow the weeders to go amongst it without hurting it.

Irrigation of growing corn was also sometimes practised when the ground was dry. It is recommended by Virgil.¹⁵ The practice of irrigation, Pliny mentions as very successful upon some districts of the territory of Sulmo, in Italy; and observes, as a very surprising fact, that the water destroyed the weeds and nourished the corn, and that watering served in place of *sarcling*.¹⁶

It was a maxim with the Romans to reap their corn before it was quite ripe. Columella is plainly of opinion, that corn ripens after it is cut. Palladius is of the same opinion.¹⁷ Pliny says, that the later wheat is of being reaped it is found to give the more flour, and the sooner it is reaped it is the fairer and plumper. The most proper time to reap is before the grain is hardened, and just when it has coloured. It was considered better to reap two days too soon, than two days too late.¹⁸

The Romans used various methods of reaping corn, and instruments equally various were employed in the work. Three different modes of reaping are described by Varro. "There is one way," says he, "as in Umbria, where they cut the straw close to the ground with a hook, and lay down each handful as it is cut. When many of these are laid down, they go over them again, and strip the ears from the stalks; then throw the ears into a basket, and carry them to the thrashing floor; they leave the straw on the field, whence it is taken and stacked up. They reap after another manner, as in Picinum, where they have a curved wooden *batillum*, upon the extremity of which is a little iron saw; this, when it comprehends a bunch of ears, cuts them, and leaves the straw standing in the field to be cut afterwards. There is a third manner of reaping, as in the environs of Rome and many other places, where they cut the stalks in the middle, the upper part of which they take in their left hands, from which middle I am of opinion the word *messis* is derived—(*a quo media messem dictam puto*). The straw below the hand which remains fixed to the ground is afterwards cut; but that which is fixed to the ear is carried in baskets to the thrashing floor."¹⁹ Other modes of reaping are mentioned by Columella. "There are," says he, "several ways of reaping. Many cut the stalks by the middle with the drag hooks (*falcibus verriculatis*), and

⁹ Col. lib. ii. c. 3.

¹⁰ Virg. Georg. lib. i. l. 208—11.

¹¹ Exod. ix. 31, 32.

¹² Lib. ii. c. 8.

¹³ Nat. Hist. lib. xviii. c. 24. The same is asserted by Palladius, lib. i. tit. 6.

¹⁴ Lib. ii. c. 12.

¹⁵ Georg. i. l. l. 106—110.

¹⁶ Nat. Hist. lib. xvii. c. 26.

¹⁷ Lib. vii. tit. 2.

¹⁸ Plin. lib. xviii. c. 30.

¹⁹ De Re Rustica, lib. i. c. l.

these either beaked or hooked. Many gather the ears with a *merga*, and others with combs. This method does very well when the crop is thin, but it is very troublesome when the crop is thick. If, in reaping with hooks, a part of the straw is cut off with the ears, it is immediately gathered into a heap, or into the shed, and after being dried by being exposed to the sun, is thrashed. But if the ears only are cut off, they are carried directly to the granary, and thrashed during the winter."¹ There was this difference between the drag-hook of Columella, and the *batillum* of Varro, that the latter cut off the ears only, whilst the former cut a part of the straw along with the ears. The *falx rostrata* seems to have been a scythe hook, sharp in the point, and curved like the bill of a bird. The *falx denticulata* seems not only to have been beaked, and sharp at the point, but toothed. Our reaping hooks, till of late, were much the same as the *falces rostrata et denticulata* of the Romans. The scythe hook, or *falx rostrata sed non denticulata* of the Romans is now more commonly used. It is difficult precisely to determine the form of the *merga* of the Romans. The word is commonly derived from the verb *mergere*, to plunge or dive into water like birds; but it may as well be derived from *mergus*, an old vine branch bent downwards, with its top set in the ground, and so called from its diving like a water fowl and coming up again. As the *merga* gathered the ears only of the corn, it is probable that the manner of working with it had some resemblance to the action of a water fowl, diving and coming up again above water with its prey. The *pecten* or comb was an instrument that cut off the ears of corn in the same manner as the *merga*. It is mentioned by Pliny as well as Columella. The former says, that the Gauls reaped the millet and panic with a *pecten*. He calls it *pecten manuale* or hand comb, to distinguish it from another used for the same purpose, which was pushed forward by an ox. In Pliny we have the following account of the ancient manner of reaping: "There are different ways of reaping," says he, "in the extensive province of Gaul. Large hollow machines, with teeth fixed in the fore part, are pushed forward on two wheels among the standing corn by an ox tied to the hind part. The ears cut off by the teeth fall into the hollow part of the machine. In other places the stalks are cut in the middle with hooks, and the ears cut off between two *mergites*. In other places they pull up the plants by the roots. Those who use this method, though they draw away the sap, imagine that it in some measure serves in place of ploughing. There is a difference in the manner of reaping, according to circumstances. Where they cover their houses with stubble, they cut high, to preserve this of as great length as possible; where there is a scarcity of hay, they cut low, that straw may be added to the *palea*."² The first manner of reaping described by Pliny, is more particularly described by Palladius. "In the plains of Gaul," says he, "they use this quick manner of reaping, and without reapers cut large fields with an ox in one day. For this purpose a machine is made, carried on two wheels. The square surface of this has boards erected at the sides, which, casting outwards, make a wider space. On the fore part the board is lower than the others. Upon it are a great many small teeth, wide set,

in a row, answering to the height of the ears of the corn, and turned upwards at the ends. On the back part of this machine, two short shafts are fixed, like the poles of a litter. To these an ox is yoked, with his head to the machine, and the yoke and traces likewise the contrary way, well trained, and who does not go faster than he is driven. When this machine is driven through the standing corn, all the ears comprehended by the teeth are heaped up in the hollow part of it, being cut off from the straw which is left behind, the driver setting it lower or higher as he finds it necessary, and thus by a few goings and returnings the whole field is reaped. This machine does very well in plain and smooth fields, and in places where there is no necessity for feeding with straw."³

Columella informs us what labour the reaping of a jugerum of each kind of corn and pulse required. A jugerum of wheat required one and a half day's work of a labourer to reap it, which would be rather more than three days to the Scottish acre; beans, one day; vetches, one; ervum, one; siliqua, one; cicera, one; lens (lentiles), one; lupines, one; sesamum, two; lint, three; and medica, one.

When their crops of grain and pulse were cut down, they were carried directly to the thrashing floor or the barn. If the field was distant from the thrashing floor, the corn, when cut with part of the straw, was carried in wains or waggons, in the same way as with us. The thrashing floor has been already described. It was placed near the farm-house on high ground open on all sides to the wind, of a round figure, and raised in the middle. It was sometimes paved with flint stones, but usually laid with clay, carefully consolidated, and smoothed with a huge roller. Varro says that it was the custom in some places to cover the area. This is done in some of the eastern countries still. Boaz is represented as sleeping on the thrashing floor all night, a circumstance by no means uncommon in warm and dry climates. Contiguous to the area was the nubilarium. The corn was carried hither directly from the field, thence it was thrown into the area, and back again, in case of a sudden shower. For this purpose, the nubilarium was covered, and was open on the side fronting the area, and had likewise apertures at the sides to admit air. Columella says, that this was particularly necessary in Italy, on account of the inconstancy of the weather. The nubilarium had some resemblance to the large barns used in some parts of England, into which the whole crop is carried. But it was not necessary to make the nubilarium so large in proportion as these, because in the mode of reaping used by the Romans, there was not so much of the straw cut with the ears as is commonly done in this country. Besides, as the corn in Italy was thrashed out as soon as possible, part of it would be immediately thrown into the area without passing through the nubilarium; and it is also probable that in general the thrashing would be begun before the whole crop was gathered. The grains of wheat were beaten out by the hoofs of cattle driven over it, or by the trampling of horses. They were also beaten out with flails, or by a machine called *tribula*, made of a board or beam set with stones or pieces of iron, with a great weight laid on it, and drawn by yoked cattle. It seems to have been the custom in

¹ Lib. ii. c. 21.

² Plin. lib. xviii. c. 30.

³ Pall. lib. viii. tit. 2. See also Dickson, vol. ii. p. 366.

Greece to beat out corn by driving oxen over it. Homer compares the slaughter made by the steeds and chariot of Achilles to the beating out of grain by the trampling of oxen. In the eastern countries they seem to have practised all the ways used by the Romans in beating out grain. Allusion is made to these by the evangelic prophet.⁴ In Britain, till of late, one only of these methods of thrashing, namely, by the flail, was practised.

Corn was winnowed in the area, after being thrashed out; for it was not carried to the granary till it was cleaned. But in what manner this operation was performed is uncertain. Two winnowing instruments are mentioned by Varro under the names of *vallus* and *ventilabrum*.⁵ These seem, from the use made of them, which was to throw the grain when beat out of the ears upon the ground, to have been sort of shovels. That the *ventilabrum* was such is clear from a passage in Columella, where he says, speaking of cleaning thrashed beans: "When there is a heap of mixed chaff and grain collected, this heap being thrown to a distance with *ventilabra*, the chaff, being light, falls short, and the grain flying farther, falls pure on the place whither the ventilator intended to throw it."⁶ The *vallus* of Varro was probably somewhat different in form, but intended for the same purpose. These instruments were used in throwing corn, while a gentle wind was blowing over it. But when the husbandman was disappointed of wind, an instrument called *vannus* was used. The west wind was reckoned the best for separating the corn from the chaff. "But," says Columella, "for a husbandman to wait for this wind is a sure sign of sloth and carelessness; for, when waiting for it, he may be overtaken by a severe storm. Therefore, in the area the corn that is thrashed should be so heaped up that it may be cleaned with any wind. But if for several days the weather should continue quite calm, the corn must be cleaned with vans, lest, after a calm, a severe storm should destroy the labours of a whole year."⁷ The *vannus* was also called *cribrum*, a sieve, *quia cribris pertusum foraminibus*. This instrument is mentioned by Virgil in his first Georgic, l. 166, and called by him the mystic van of Iacchus or Bacchus:—

Now learn what arms industrious peasants wield,
To sow the furrow'd glebe, and clothe the field;
The share, the ponderous beam, the rolling wain,
That draws along slow Ceres to her fane;
Flails, sleds, light osiers, and the harrow's load,
The arbutu hurdle, and the van of god.

Sotheby's Georgics, l. 197—802.

In the eastern countries they had several instruments for winnowing, two of which are mentioned by Isaiah—the van and the shovel.⁸ Amos mentions a sieve for sifting.⁹ That corn was sifted as well as flour appears from our Lord's words to the over confident Peter: "Simon, Simon, Satan hath desired to sift thee as wheat." The Greeks, also, had different instruments for winnowing, one of which seems to have been of the same kind as the *ventilabrum* of Varro, and had probably some resemblance in shape to the modern shovel. Homer, when describing a people unacquainted with navigation, represents a shepherd, upon seeing

an oar, calling it a van.¹⁰ When grain was intended to be kept a long time, a second dressing was commonly given it. "If corn," says Columella, "is to be laid up for years, it ought to be again cleaned (sifted), for the cleaner it is, the less it is hurt by the *wivil* (a species of small worm). But if it is intended for immediate use, there is no need for this second dressing. It is enough to have it exposed a little in a shade, and so laid up in the granary."¹¹ In the methods of cleaning grain the moderns have attained much perfection. The machine invented not many years ago, called *fanners*, is certainly a mighty improvement on the *van* of the ancients. It must be remembered, however, that as the ancients were at much greater pains in keeping their lands free from weeds than the moderns, the dressing of corn would not be so difficult an operation to them as it was at one time to us.

The corn when cleaned (*expurgatum*) was laid up in granaries (*horrea vel granaria*, from *granum*, grain) variously constructed, and sometimes in pits, where it was preserved for many years. As it was a matter of greater difficulty in Italy to preserve grain than with us, many and various directions respecting the proper construction of barns and granaries, and keeping them cool and well ventilated, are given by the Roman writers on agriculture, from Cato down to Palladius. Varro says, that "wheat ought to be laid up in high granaries, exposed to the east and north winds, upon which no moist air from the neighbouring places blows. The walls and floors ought to be well secured with marble plaster, at least with such as are made of clay and amurca (lees of oil), mixed with the chaff of corn. This suffers neither mouse nor worm, and makes the grain more firm and solid. Some sprinkle the wheat itself with the lees of oil, at the rate of a quadrantal to a thousand modii (pecks), and others powder it with other things, such as chalk of Chalcis or Caria, or wormwood, and other things of this kind. Some have caves below ground for granaries, which they call *cuvæ*, as in Cappadocia and Thracia. Others have wells, as in Hither Spain, in the country about Carthage and Osca. They strew the floors of these with straw, and are careful not to allow any moisture to get in, or even air, except when they take out the corn; for where the air does not penetrate the *wivil* does not breed. Wheat laid up in this way remains good even fifty years; millet more than an hundred. Some make very high granaries above ground in the fields, as in Hither Spain and Apulia; and some make them in such a way as to be ventilated not only from the sides through the windows, but also from below through the floors."¹² Columella advises that granaries should be entered by ladders, and have small windows to the north, for this exposure, being dry and cold, is favourable to the preservation of corn. "Some," he says, "recommend arched barns as the best for preserving corn." "In Italy," he adds, "which has too much moisture, we prefer the hanging granaries, with the pavements and walls well secured, to prevent the *wivil*. When this pest seizes corn, many think to restrain it by proper ventilation, thereby, as it were, airing the affected corn in the barn. But," continues he,

⁴ Isaiah xxviii. 25—28.

⁶ Col. lib. ii. c. 11.

⁸ Isaiah xxx. 24.

⁵ Lib. i. c. 52.

⁷ Lib. ii. c. 21.

⁹ Amos ix. 9.

¹⁰ Odys. xi. It is also mentioned in the *Iliad*, b. xiii.

¹¹ Col. lib. ii. c. 21.

¹² De Re Rustica, lib. i. c. 57. a. 3.

"this is an egregious mistake; for these animals are not expelled by this operation, but are mixed with the whole grain, which, when it remains untouched, is infested only in the upper part, because a handbreadth below, the wivl is not bred, and it is much better that the part which is already spoiled should remain so, than that the whole should be endangered. And when there is a call for any of the corn, it is easy to take off what is spoiled on the top, and make use of what is below."¹ The manner of ventilating corn here mentioned, was probably by throwing it from one place to another by a shovel. Olives were ventilated in a similar manner, as we learn from Varro. "If the gathered olives," says he, "be too long in the heap, they rot by heating, and the oil is fetid. Therefore if you cannot despatch them in time, it is necessary to ventilate the heaps by throwing."² "Some," says Palladius, "mix coriander seeds with the corn, to preserve it. The best method, however, is to carry the corn from the area to some other place near at hand, and there to air it for a few days, and so lay it upon the granary. Conyza, an herb bitter of taste, and of a disagreeable odour (as the Greeks assert), strewed dry below corn, helps to preserve it. To all these may be added, the barns must be secured against the south wind."³ Pliny, after treating of the harvest, gives the following account of the different kinds of granaries: "Some require costly barns to be built with walls three feet thick, besides this to be fitted from the top, to have no windows, and admit of no wind; others allow of windows to the north and north-east, but require that granaries be built without lime, as it is a thing most prejudicial to corn. On the contrary, in other places, they raise wooden galleries upon pillars, and expose them to the wind on all sides, and also from the floor. Others again are of opinion that grain becomes shrivelled by lying upon a deal floor, open below, and that it heats by lying under a tile roof." He recommends that grain be laid up dry, and firm, and cool, otherwise it will be damaged. He says that beans, and other pulse, in oil casks daubed with ashes, will last good a long while; and that beans, in a cave of Ambracia, remained good from the time of king Pyrrhus to the piratical war in the time of Pompey the Great, about 120 years.⁴ The pits for preserving corn, mentioned by Pliny, are still used in Sicily near Girgente.

It has been already mentioned, in describing the Roman mode of reaping, that sometimes the whole straw, and at other times one half of it, was left standing, and that it was afterwards cut. This was done in the end of July, or 30 days after the reaping of the corn, as we are informed by Columella, who adds, that a man may cut a jugerum of it in a day. This operation is called *spicilegium* by Varro, who says, that if the crop be thin, and the price of labour high, it should be eaten upon the ground. What he means is, that the cattle should be put upon the stubble as it stood upon the field, without being at the expense or trouble of cutting it down. Yet, as straw was used for a great many purposes, it was necessary to carry the greater part of it home. It was used for littering cattle and sheep. Hence Varro says, that straw was called *stramentum*, because it is strewed under the cattle. Sometimes it was bruised for this

purpose, and when deficient, holm leaves and ferns were used instead. The pales or short straw that was bruised in the area was given to the cattle in place of hay. Columella, after naming the articles most proper for feeding cattle, adds: "They are fed less advantageously with straw, which is every where used for this purpose, and in some places is the only thing to be got. The best straw is that of millet; after it, that of barley; and next, that of wheat."⁵ He in another place represents the straw of different kinds of pulse as best for sheep; for, after describing the food most proper for this animal, he says, "When other things are wanting, the straw of pulse is likewise necessary."⁶ Pliny says the same thing, with this difference only, that the shorter, the smaller, and more easily reducible to dust, the straw in the pen is, the better it is for food to cattle.⁷ Straw was also used for thatch; and for this purpose they cut high in reaping.⁸ In other places where hay was plenty, the pales or short straw was used for litter, and the other straw was sometimes burned in the fields. This method is represented by Virgil as very beneficial to land.⁹ The poet speaks of two burnings; the one refers to burning the soil itself before it is ploughed; the other to burning the stubble after the corn is taken off the arable land. This custom is mentioned by Pliny, who says, that the chief reason for it is to burn the seeds of weeds; and in another passage he observes, that for the most part the straw of millet was burned. These different customs, he alleges, were observed in different parts of Italy, according to the extent of the harvest and price of labour.¹⁰ The custom of burning fields is still practised in Italy. Fontanini, in his Italian antiquities, relates that Maria Lancisi, who possessed real influence with Pope Clement II., being incommoded by the heat caused by the burning of the fields in the vicinity of Rome, persuaded him to proscribe that custom by an edict; but Cardinal Nupti overturned the edict by representing to his holiness the antiquity and utility of the practice, and citing to him the lines of Virgil above referred to.¹¹ There is nothing more common than to prove the utility of a practice, however absurd, from its antiquity, and especially if it be ennobled by the creative fancy of a native poet. Our modern farmers think, with reason, that burning the stubble on the fields is very injurious. Burning the straw to obtain the grain was an ancient practice in Ireland; and the practice of trampling the grain with oxen in France, in preference to thrashing it with the flail, continued in that country down to the Revolution, as we are informed by Dr. Young, and is perhaps not yet wholly discontinued. The burning of stubble seems also to have been prevalent in the eastern world. We have allusions to it in the writings of the prophets.¹²

The quantity of wheat sown upon a jugerum was five modii; of barley and beans, a medimnus, or six modii; and of pease, three modii. The return of wheat was on the best land 15 fold, or 75 modii the jugerum; on middling land, 10 fold, or 50 modii the jugerum; or at a general medium, the wheat crops in the time of

1 Col. lib. l. c. 6. s. 12

3 Lib. l. tit. 19.

2 Var. lib. l. c. 55.

4 Plin. lib. xviii. c. 30.

5 Col. lib. vi. c. 5. s. 3.

7 Plin. lib. xviii. c. 30.

9 Georg. lib. l. v. 84.5.

6 Col. lib. vii. c. 3. s. 22.

8 Lib. Idem.

10 Plin. lib. xviii. c. 30.

11 See De Lille's French Poetical Translation of the Georgics.

12 Isaiah v. 24. Obad. 18.

Varro produced 10 fold. In the days of Columella, agriculture had declined so much, that he says, the average crops were not above four after one, or only 20 modii the jugerum—a prodigious decrease in the space of 70 years. It is probable, that the average return of wheat crops in Italy would be 15 fold, or 75 modii the jugerum, in the days of Cato and Metellus, so that, in the time of Columella, the average return of wheat did not amount to one-third of what was produced when Roman agriculture was at its acme. In the time of Columella, the rent of middling corn land was 40 sestertii the jugerum, which at 2d. the sestertius, is 6s. 8d. the jugerum, or 10s. 8d. the English acre. In the days of Varro, wheat was so low as 3½ sesterces, or 7d. the modius, and even so low as 2½ do. or 5d. the modius, as may be learned from Cicero's celebrated oration against Verres. "Have you not," says he, "carelessly sold the tenths, when they amounted to 15,000 modii, that is, to 37,500 sesterces?" Now, this is just 2½ sesterces the modius. In another place he says, "The modius is estimated by law at three sesterces." In another passage of the same oration he says, "But I charge him with this, that when the modius in Sicily was at 2 sesterces (4d.) as his letters sent to you declare, and the highest price at 3 sesterces, as has already been clearly shown, both from the testimony of all concerned, and also from the records of the husbandmen, then he exacted from them 3 denarii for each modius" (2s. the modius.) In another passage, he mentions two kinds of corn at different prices—the corn at 3 sesterces, or 6d. per modius, and the *frumentum imperatum* at 4 sestertii, or 8d. per do. From these facts we may legitimately fix the medium price of wheat in the time of Varro, who was cotemporary with Cicero, at 3½ sestertii, or 7d. the modius or peck. But Varro informs us, that in the days of Lucius Metellus, or nearly a century before the death of Cato, a modius of far (spelt wheat) was sold for an as (scarcely 1d. English); likewise a congius of wine (9 English pints, or 9 Scotch mutchkins) 30lb. of dried figs, 10lb. of oil, and 12lb. of fish, each for the same price. It must, however, be observed, that the far was sold in the husk, so that a modius of triticum or wheat was equal to 2 modii of far. In this proportion, wheat would then be at 4-5ths of a sestertius, or 1¾d. the modius. In the days of Polybius, cotemporary both with Cato and the younger Africanus, a medimnus of wheat (6 modii, or pecks,) and a metretres of wine (10 gallons 2 pints English), were sold for 4 oboli, or 6½d. each. But it may be, that Polybius intended the Attic medimnus, which contained 4 pecks and 6 pints. If so, the price of wheat would be 1½d. the modius, or nearly double the price in the consulate of Metellus; if not, then the price was much the same. One of two things must have caused this extreme cheapness of wheat and other productions of the soil—either that money was scarce, and the price of land and labour low, or that agriculture was then brought to greater perfection, and more were engaged in it than in any subsequent period of Roman history. Pliny ascribes it to the latter, but whether justly or not, I leave to political economists to determine. Still it is a fact, that long before the time of Varro, agricultural produce had both declined in quantity and risen in price. Yet in his day four sesterces, or 8d. the modius, or £1:0:8½ the quarter, was the highest price given for

wheat. This is still a very small price, when we consider the riches which the Romans then possessed, and the rapid strides which luxury had made amongst them, both of which in every nation must have an effect upon the price of corn as well as of other things. Several causes contributed much to the decline both of agriculture and population. The introduction of slave labour, which may be traced back to a period anterior to the age of Cato, was not the least of these. The Patricians or Roman nobility gradually acquired most of the conquered lands, in open defiance of the Licinian law, and cultivated them by slaves. In consequence of this, when Tiberius Gracchus was passing on his way through Etruria (Tuscany) to Spain, he found it almost depopulated of freemen. Similar conduct was pursued by the Romans in Sicily. They engrossed nearly all the estates to themselves, and employed slaves instead of native Sicilians to cultivate their lands, to whom they scarcely allowed the necessities of life, so that the slaves broke out into open rebellion, and ravaged the whole island. So great was their number, that they amounted to 200,000 armed men, and were with great difficulty reduced to subjection. The other causes which hastened the ruin of agriculture were the various wars that took place between the year of Rome 663 and 724, as the social war, in which 300,000 men perished; the civil wars between Marius and Sylla—between Cæsar and Pompey—between the conspirators and the triumvirate—and, lastly, between Augustus and Antony. These ruined both the morals and industry of the people, as well as the country itself. The labours of the field, instead of being pursued as formerly, by the proprietor, or by free and industrious peasants, were confined to the care of slaves. The frequent proscriptions that took place during the civil wars, when the one party proscribed the persons and properties of the other, were also exceedingly calculated to injure agriculture. Above 18 of the most flourishing colonies of Italy were proscribed by the triumvirate, and their lands and houses given to the legionaries, who avenged the death of Cæsar, and annihilated the freedom of Rome. Their acts of violence and injustice to the native proprietors of the soil, even in what has been properly denominated the Augustan age, surpassed those of the Goths, in the reign of Honorius, who, under Alaric, bore away in triumph the spoils of the capital. While Virgil, with the utmost difficulty, escaped from the sword of a Roman centurion, who had usurped his small farm, Paulinus of Bourdeaux received a sum of money from a Gothic soldier in return for his landed property. Virgil complains of the neglect and decline of agriculture thus occasioned, in the following pathetic lines:—

None venerate the plough; waste Earth deplors
Her swains to slaughter dragged on distant shores;
Far, far they fall from their uncultured lands,
And scythes transformed to falcions arm their hands.
Sothby's Georgics, l. 613—16.

Notwithstanding this decline of agriculture on the one hand, and the accumulation of wealth which had flowed successively for many years from a subjugated and a plundered world into Italy, on the other, it is surprising that wheat should have brought no more than from 12s. 6d. to L.1:0:8½ the quarter in the time of Varro. Two things seem to have contributed to this—the comparative attention still paid to agriculture, and the nature of the Roman luxury.

Though in Varro's day farming was much more neglected than in former times, yet it still continued to be a respectable employment. Landed proprietors were then, from their education, capable of giving proper directions in all the branches of agriculture, and were also proper judges of all rustic labour. Hence, the crops in Italy, as has been already remarked, continued to be good, yielding ten to one, at an average. There can be no reasonable doubt, also, that many considerable improvements would be introduced into the practice of Italian husbandry, and that many provinces, having little commerce and few manufactures to take off the surplus produce of their own lands, would afford to export large annual supplies of grain to Rome. Julius Cæsar boasted, in his triumph over Pompey's party in Africa, that he had conquered a country so rich and extensive as yearly to supply the city of Rome with 900,000 modii (pecks) of wheat, and 3,000,000 measures of oil, (3,375,000 gallons English.) The kind of luxuries in which the Romans indulged, also prevented in some degree the increase of the demand for grain. The luxury of even luxurious Romans consisted at their tables chiefly of rare birds and fishes, reared and purchased at great expense and nicely seasoned, by which the consump of corn was but little increased. They seem, besides, to have had few horses of any kind. Their cavalry were far from numerous, and not at all in that proportion to infantry usual with us. In any accounts that have reached us of the effects of individuals, neither horses nor mules are mentioned. Agricultural labour among them was performed solely by oxen, which are much more easily maintained than horses, and the quantity of them bred, naturally kept the price of beef low, the only kind of animal food used by the common people. But from the time of Varro to that of Pliny, a space of only seventy years, corn rose from $2\frac{1}{2}$ and 3 sesterii and even 4 sesterii the modius to 12 sesterii. This cannot be accounted for from the increase of population, as Italy was much less populous in the time of Pliny than before the civil wars of Marius and Sylla, being estimated by him at 14,000,000, a smaller number than the present population of Italy, and yet modern Italy imports no corn as in the days of Augustus and downwards. Pliny says, that before his time, or under the reign of Vespasian, 52 tribes in ancient Latium had utterly disappeared, and he points out several towns in Campania, which had either ceased to exist or were in a state of rapid decay. He also mentions several temples neglected and falling into ruin even in places near Rome, and frequently uses such phrases as, *sunt reliquæ—jam tota abiit—quondam uberrima multitudines*—and others, evidently indicating a decreasing population and a declining country. It has been asserted by some, that the importations from Egypt, Sicily, and Africa, were the real causes of the decline of Italian agriculture. It must be remembered, however, that the importations were confined to Rome and its vicinity only, and could not in any great degree affect the state of the Italian market. But what object could have been gained by the foreign cultivator in a market where the wheat sold at the reduced price of from 5d. to 8d. a modius? After the charges of carriage, shipping, and agency were paid, I do not see how the foreign cultivator could meet the home cultivator in the Italian market. Besides this, both the landed proprietor and farmer in Italy were free from every species of taxation, which was not the

case with those of the other provinces of the empire; and if labour in Italy had been on the same footing as in Britain, competition would have been vain, as agricultural produce must have been brought to the home market on such low terms as must have excluded all foreign grain from coming into competition with it. Neither Columella nor Pliny, who seem to have been well informed on the subject, mention the importation of foreign grain as a reason of the decline of agriculture. If low prices, as the agriculturists say, ruin agriculture, then, on their own reasoning, high prices must encourage it. Now, what is the cause that notwithstanding the high price of corn in Pliny's days, agriculture was in a much lower state of decline than in the days of Varro? An Italian farmer had surely more reason to cultivate wheat, on the score of self interest, when he could obtain L. 3 : 2 : 2 per quarter, than when he could get only L. 1 : 0 : 8 for the same quantity, as in the days of Varro. If demand regulate supply, and if the latter is so disproportionate to the former, as to raise it to three times its usual price, then, on all the ordinary principles that regulate human conduct, a supply fully competent to the demand must have been ensured, and every field in Italy capable of cultivation must have waved with wheat, and both the value of land and amount of rent must have risen in consequence. But instead of that, we find agriculture in a continual decline, and land proportionally falling in value. The root of the evil consisted chiefly in two things: the land was locked up in the hands of a few proprietors, and left almost wholly to the management of slaves. Gibbon calculates the number of slaves to have been at least equal to the free inhabitants of the Roman world. The ancient proprietors had every inducement that love of happiness and independence could generate, to cultivate their small paternal farms to the utmost; and, therefore, all that could be made out of the soil by unremitting labour was obtained. But in the case of slave-labour, the result was quite different. "The experience," says Dr. Smith, "of all ages and nations demonstrates, I believe, that the work done by slaves, though it appears to cost only their maintenance, is in the end the dearest of any. A person who can acquire no property, can have no other interest but to eat as much as possible, and to labour as little as he can. Whatever work he does beyond what is sufficient to purchase his own maintenance, can be squeezed out of him by violence only, and not by any interest of his own. In ancient Italy how much the cultivation of corn degenerated—how unprofitable it became to the master when it fell under the management of slaves—is remarked both by Pliny and Columella. In the time of Aristotle, it was not better in Greece."¹ The system of slave-management was even far more prejudicial to agriculture than that of the politors, who received only one-fifth of the clear produce of the farm; for such tenants, being freemen, were capable of acquiring property, and as they got a certain proportion of the produce, it was evidently their interest that the land should yield as much as possible by means of the proprietor's stock. But even in the case of the politors, who received only one-fifth of the produce, it could not be their interest to lay out any part of their savings in the farther improvement of the land,

¹ Wealth of Nations, vol. i. p. 59, fourth edition.

because the proprietor, who laid out nothing, was entitled to four-fifths of whatever such improvements might produce.

It is agreed by all that the grain which we call wheat, is the Roman *tritium*; but it is not so clear what the Romans meant by *far*. German spelt seems to have the nearest resemblance to it. There are three kinds of triticum mentioned by Columella—*robur*, *siligo*, and a species of spring wheat of the nature of the *siligo*, and very useful, he says, to the farmer when he is prevented from sowing in autumn. The other kinds he tells us are not profitable, and are only cultivated by those who pride themselves in having variety.

There was this difference between triticum and *far*, that the former was separated from the husk by thrashing, but the latter could not be cleaned without toasting, and was therefore sown along with the husk, which, being strong and durable, rendered it better for wet land and long continued moisture than triticum. Columella and Pliny agree, that, while triticum, *siligo*, and *hordeum* are separated from the chaff, and sown clean as when grinded, because they are not toasted, *far*, millet, and panic, on the contrary, cannot be thoroughly cleaned unless toasted, and are therefore sown rough with their husks. On this account, a larger quantity of *far* was sown on a field than of triticum. "There are sown," says Varro, "on a jugerum four modii of beans, five of triticum, six of barley, and ten of *far*." So also say Columella and Pliny. But Palladius says, that the same quantity of each was sown on the jugerum. It is probable that in his time some easier method had been found out for separating *far* from its husk, than had been known in the days of Pliny, and that therefore it was become the custom to sow it pure like the triticum. *Far* is represented by Pliny as the hardest of all grain, which best stands the winter, and does well on any soil—and he also says, it was the food of the Romans in the first ages, as was evident from their religious rites. On the other hand, he represents triticum as requiring most nourishment of all grain, but at the same time as the most fruitful of any.

As there were three kinds of triticum or wheat, so were there of *far*—*clusiunum*, *venaculum*, and *alicastrum*. The first was of a bright white; the second was of two sorts, red and white; and the last was a spring wheat, superior to the others in excellence and weight. According to Pliny, Italian wheat or triticum was superior to all other kinds of wheat in brightness and weight. The best of foreign wheat, he says, was the Boeotian wheat; next Sicilian; and, thirdly, African wheat. "Of all the grains," he adds, "that are brought to Rome, the Gallic wheat, and that which comes from the Chersonesus, (Taurica, I suppose) are the lightest; for even when well dressed, the modius does not exceed 20 lbs. The kind from Sardis gives half a pound, and that from Alexandria a third of a pound more. This, too, is the weight of the Sicilian; the Boeotian gives a whole pound more; and the African, three-fourths of a pound more. In Italy, beyond the Po, I know that a modius of wheat weighs 25 and even 26 pounds." Pliny allows, that in ordinary military bread there was a third more of bread than wheat, and that a *congius* of water to the modius was used in baking very good grain. In this proportion, a modius of Italian wheat weighing 24 pounds, produced upwards of 32 pounds of bread.

Hordeum or barley was but little cultivated by

the Romans. It was the food of horses,² sometimes used for bread,³ and given to soldiers instead of wheat, by way of punishment.⁴ The ancient inhabitants of Gaul and Spain made the same use of barley that we do at present. "The western nations," says Pliny, "get drunk by steeping corn." In Gaul and Spain are several kinds of this liquor, which have different names, but are made in the same way. It is said that in Spain the liquors keep good a considerable time.⁵ In another place he says, "of the same corn a liquor is made, *zythum* in Egypt, *calia* and *ceria* in Spain, *cervisia* and other kinds in Gaul and the other provinces; with the foam (*spuma*) the women make a wash for their faces."⁶ Elsewhere he says, that the Gauls and Spaniards use the foam (barm or yeast) of it thickened for ferment to make the bread lighter.⁷ It is probable that in the days of Pliny, vineyards were not in these countries so common as now, and that the inhabitants were therefore obliged to make ale as a substitute for wine.

Two kinds of barley are mentioned by Columella, that were sown in Italy—*bexastichum* or *cantherinum*, and *distichum* or *galaticum*. "The first of these," he says, "is next in value to wheat, better even than wheat for food to cattle, and more wholesome than bad wheat to men; nor is there any thing more proper for supplying the wants of men in times of scarcity. It is sown on a free and dry soil, and upon land either very rich and strong, or very poor. It is reckoned a most severe crop, on which account it is sown either on very rich land, the superabundant fruitfulness of which nothing can destroy, or on poor land that is fit for no other crop. It is reaped much sooner than any other corn, even when but a little ripened; for having a brittle stalk, and no husk to cover the grain, it is easily shaken out; for the same reason it is more easily thrashed than any other grain. After it, the land should be fallowed, if not, well dunged, to drive out all the bad qualities it has acquired."⁸ "The second kind," says the same author, "is very heavy and white, and when mixed with wheat makes an excellent household bread." Cato enumerates barley among those crops which are hurtful to land. All the rustic writers admit that it must be sown on dry soil, because if sown on a wet soil, it dies. Virgil gives no directions about the culture of barley, but only that it should be sown at the autumnal equinox.⁹ Pliny remarks, that barley is reaped before the mildew attacks the wheat, and that it is a common saying, that barley is sown in the *sack*, because it makes so quick a return, and is so fruitful. He says, that it was used in the most early ages for food, as appears from the Athenian customs, on the authority of Menander, and from the name given to Gladiators, who were called *Hordearii*, eaters of barley. "The present mode of living," says he, "has condemned the use of barley bread, once used by our ancestors, and given it for food to quadrupeds."¹⁰

Oats were cultivated chiefly as food for horses; sometimes also they were made into bread (*panis avenaceus*). The sterile *avena* of the ancients were not the common oats degenerated by grow-

² Col. vi. 50.

³ 4 *Iav.* xxvii. c. 13.

⁴ 6 *Ib.* lib. xxii. c. 25.

⁵ 8 *Colum.* lib. ii. c. 9.

³ Plin. lib. xviii. c. 7.

⁵ Plin. lib. xiv. c. 22.

⁷ *Ib.* lib. xviii. c. 7.

⁹ *Georg.* lib. i. l. 211.

¹⁰ *Ib.* xvii. c. 7.

ing wild, but a different species, the husks of which is hairy, and the seed small, like that of grass. It was the general opinion of the ancients, that wheat and barley degenerated into these weeds. "*Vitium frumenti*," says Pliny, "*cum hordeum in eam (nempe avenam) degenerat*;"¹ but they are specifically different, and rise from their own seeds. It is remarked, that wild oats will remain a century in the ground without losing their vegetative quality. As they ripen before other grains, they shed their seeds on the ground, protected from the birds by the roughness of their coats. As the rustics used to play on an oat stalk, *avena* is hence put for a pipe.

The pulse cultivated in our country are principally pease and beans. But the Romans had a greater variety of leguminous plants and seeds than we. Faba, (the small bean) pisum, (pease) lupinum, (lupine) phaselus, or phascolus, (the kidney bean) lens, (lentile) cicer, cicercula, vicia, vervum, (vetches or tares) sesamum, (sesame)—are all enumerated by Columella. These served chiefly for food to cattle, and also to slaves and others, especially in times of scarcity, when not only the seed but also the husks were eaten. The turnip (*rapum*, *rapa*, or *rapus*) was cultivated for the same purpose. According to Pliny, beans or fabæ were the most useful legumes, for this reason, that bread was sometimes made of it; and, next in order, he places turnips. Beans were generally sown upon the strongest land, or on land well dunged. The seed was sown immediately before the full moon in the month of October or beginning of November, at the rate of six modii to a jugerum. Sometimes, before sowing, it was steeped in amurca and nitre, and sometimes in urine and water. After the land was sowed, it was ploughed as the fallow when it got the first furrow, and was afterwards formed into ridges, so as to keep it dry during the winter, and allow the crop to be hoed. This operation was performed twice, and sometimes three; and if the land was not bettered by the crop, it was universally allowed not to be much the worse.

With turnip husbandry the Romans were well acquainted, and turnips were a favourite food with the rustics. Two kinds of this vegetable were cultivated by them—the *Napus* and *Rapa*; and the difference between the two sorts, according to Columella and Palladius, lay merely in their adaptation to different soils, the former delighting in a dry and sandy soil, and the latter in a low and wet soil. Of these two kinds, the *rapa* was esteemed the more useful, as being more productive, and serving not only as food to man but also to oxen, especially in Gaul, where, as Columella informs us, these cattle were fed with them in winter. By the Greeks the turnip was merely cultivated as a garden vegetable, but by the Romans turnips were esteemed next to corn for nutriment both to men and beasts. Pliny says, that turnip seed was good food for all kinds of village fowls, especially when boiled in water; that quadrupeds are also fattened by the leaves, and that in their season the shoots are as agreeable to man as those of any other plant; that when dried and preserved, turnips are stronger than when green, for they become hard, and when preserved in the earth, they remain good almost to the season of the next crop. He observes further, that the people on

the other side of the Po (Transpadane Gaul) esteem a crop of turnips next in value to grapes and corn. "They are approved of for our tables, dressed in a variety of ways, and they are preserved the whole year mixed with mustard. Besides their natural colour, they may be painted six others, and amongst these purple, nor is there any other thing used at our tables that can conveniently be dressed in this manner. The best kind (of turnips) grows in the fields about Nursia (in Picenum). Hence *Nursina pila vel rapa*, round and smooth turnips. A pound is commonly sold for a sesterlius (2d.), and in times of scarcity for two sestertii (4d.). Next to this kind is that species produced in the fields about Algidum" (Rocha del Papa, near Rome).² "Turnips of this species (*rapa*) may be sown where scarcely any other crop will succeed. They agree well with mists, hoar frosts, and cold. By these they are nourished to a prodigious bulk. I have seen some of them upwards of 40lb. weight. By cold they are supposed to be made both sweeter and larger, and by heat they grow to leaves. The Amiterian *Napus*, which is of the same kind, delights equally in cold."³ As the turnip crop in Italy, as well as in Britain, is apt to be destroyed by the fly, whilst in the first blades, and in the time of drought, the farmer was recommended by Columella to gather the dust in his chambers, or the soot adhering to the roofs above the fires, and, on the day previous to sowing, to mix it with the seed, and sprinkle it with water, that through the night the sap might be sucked in; for thus steeped, the seed may be sown next day. He also mentions, that, as a remedy against insects, Democritus directed that seeds should be anointed with the juice of the herb *sedum* (a species of leek). "This," adds he, "I have found to be true, from experience. But as the sowing of this plant is not very great, I have more frequently used soot and the above-mentioned dust, and have thereby well enough secured the plants from injury."⁴ Palladius recommended the spreading of the lees of oil or soot from the chimney as a remedy against the fly. Whilst turnips were growing in the fields, it appears that persons were not much restricted from pulling them. It is remarked by Columella, that in his time the more superstitious husbandmen still observed the customs of the ancients, who, while sowing them, prayed that they might grow both for themselves and their neighbours. The same custom is mentioned by Pliny, who adds, that the sower sowed naked.⁵ Every thing is so similar in the Roman and British methods of turnip husbandry, that to describe the one would be to describe both.

All the ancients considered the culture of flax as detrimental to land. "To convince us," says the sage Pliny, "that Nature is unwilling to produce flax, it burns land, and makes the soil much worse."⁶ It was chiefly used by the Romans for sails and cordage to ships. "What greater miracle," says Pliny, "than that there should be a plant that makes Egypt approach nearer to Italy—that there should grow from so small a seed, and from so slender and short a stalk, that which, as it were, carries the globe itself to and fro!" He mentions likewise that linen was made of it by some nations for wearing apparel. "The Cadurci, the Caleti, the Ruteni,

1 Pliny, lib. xviii. c. 17.

2 Plin. lib. xviii. c. 13. 3 Ibid. 4 Lib. xi. c. 3.
5 Col. lib. Nat. Hist. lib. 6 Lib. xix. c. 1.

the Bituriges, and the Morini, reckoned the most distant of all men, even all the nations of Gaul, weave it into webs; and long ago our enemies beyond the Rhine did the same, nor did their women know any garments more beautiful than those made of this stuff." It was generally sown on very rich and moist land, at the rate of eight modii to the jugerum, and if on well dunged land, at the rate of ten modii to the jugerum. It was the opinion of some that it was best to sow it thick on poor land, as thereby finer flax was produced. According to Pliny, it was sown in spring, and pulled in summer. He is the only author who tells us in what manner lint was managed in Italy. "We know," says he, "when it is ready, by two marks, the swelling of the seed, or the colour becoming yellow. It is then pulled up, bound into small bundles, and dried in the sun, hanging one day with the roots uppermost, and other five the contrary way, with the tops of the bundles inclining towards each other, that the seed may fall into the middle. The seed has power as a medicine, and was formerly used by the nations beyond the Po for making a rustic and luscious kind of meat, but for sometime past this is used only in religious ceremonies. After the wheat harvest, the stalks, deprived of the seeds, are steeped in water that has been warmed in the sun, having some weight upon them to keep them down, as they are of themselves very light: the skin parting easily from the boon is the sign that it is sufficiently watered. It is then turned up and down as before, and dried in the sun. When dry, it is bruised on a stone by a lint mallet. That which is next the boon is called steepa; is an inferior kind of flax, and fit for little but wicks of candles. Yet even this is combed in iron heckles till all the skin is freed from the boon. There are many kinds of the fine flax distinguished by their colour and softness. To spin flax is becoming even in men. The boons (cortices), when separated from the flax, may be used for heating ovens or furnaces. There is an art in heckling and managing flax. When this is properly done, 50lb. of dried lint in the bundles should produce 15lb. of heckled flax. Afterwards it is whitened in the thread, frequently taken out of the water and beaten upon a stone, and when woven is again knocked with mallets, being always made more excellent by the injury." He mentions a species of incombustible flax called *linum asbestinum*, from its nature. "There is one kind lately found out, which is not consumed by fire. It is called living flax. I have seen tablecloths of it thrown into a fire as they were taken from the tables after an entertainment, and cleaned much better, and made brighter than could have been done by water. Hence shrouds for kings are made of it, and thereby the ashes of the body are separated from the other ashes. It is produced among dire serpents in the burning sands of India, where no rain falls, and is thereby accustomed to live amidst burning. It is very rarely to be found, and is twisted with great difficulty on account of its shortness. The red colour of all others becomes the most splendid in the fire. When found, it is equal in price to the finest pearls. It is called the Greek *asbestinum* from its nature." Pliny also mentions another species of flax, of which he narrates most extraordinary things. "It is not long since the flax of Zoelicum was brought

from Spain into Italy, most useful for gins or snares. "This is a city of Galicia near to the ocean. There is an excellent kind likewise made at Cumanum in Campania, for making nets for catching fishes and birds; very proper also for snares, for we do not set fewer snares of flax for all kinds of animals than we do for one another. The snares made of the flax of Cumanum are so strong as to entangle boars, and so hard as to resist even the stroke of a sword. I have seen these snares of such fineness as to pass with the ropes at the upper and under side through the ring of a man's finger; one man being able to carry as many of them as to surround a forest. Nor is this the most extraordinary thing; for each thread of them consisted of 150 ply; such as lately belonged to Julius Lupus, who died governor of Egypt. The ignorant may wonder at a thing of this kind in the breastplate of a king of Egypt called Amasis, found in the temple of Minerva, in the island of Rhodes. The threads of this breastplate are shown to consist of 365 ply. Mutianus, thrice consul, who found this out lately, has shown it at Rome. But very little of it now remains, by reason of the trials that have been frequently made causing injuries." These passages show not only that the ancients raised flax of an extraordinary fineness, but also carried the art of spinning and twisting yarn to a state of high perfection.

There were a great many herbs and grasses cultivated by the Romans, to be cut green for the labouring cattle, as *ozymum*, (*baal*) *foenum Græcum*, (*fenogreek*) *vicia*, *cicera*, *ervum*, (*vetches*) *farrago*, (*mingled corn*) *medica*, (*lucerne grass*) and *cytisus*, (*shrub trefol*)—the two last particularly for sheep. These were sown sometimes thrice a year, according to Columella. The first sowing was for a crop of fruit, in the month of January, and was at the rate of six modii to the jugerum; the other for forage, about the autumnal equinox, and at the rate of seven modii to the jugerum. Pliny allows three sowings to vetches annually—one in the end of September, to be pastured in December; for then, says he, is the best time to sow it for fruit, and it will not be hurt by being pastured: the second sowing he places in January, and the third in March. By these successive crops of green forage, the land was supposed to be improved, as well as the cattle supported, and the straw of vetches was esteemed the best of any, and, besides, required very little culture. But it was also supposed that if these sorts of green forage were allowed to wither in the ground before it was ploughed, they impoverished it. *Medica* was also sown for forage, and was considered as a medicine for sick cattle. From this circumstance it has been supposed that it derived its name of *medica*, in the same way as the Assyrian apple derived its appellation of *malum medicum*, because it was supposed to cure poisons; but it is more probable, that the appellation of *medica* to lucerne grass was derived from *Media*, where it grows naturally, and whence it was brought into Greece by Darius Hystaspes, and thence to Italy. Palladius and Columella esteem *medica* the most excellent of all herbs, because one sowing of it lasts ten years, and it affords four, and sometimes six cuttings annually, enriches land, fattens lean, and cures sick cattle, and one jugerum completely feeds three horses for a whole year. Pliny agrees in

7 Lib. xix. c. 1.

8 Ibid.

9 Ibid.

10 Lib. xix. c. 1.

all these described properties of medica; but instead of allowing ten years for one sowing, he says that it lasts thirty years. As Pliny was indefatigable in his inquiries, he may have seen or been informed that it lasted actually so long as he states, though it was seldom allowed to stand, or continued good for more than ten years. It is commonly destroyed by the natural grass, and it is uncertain how long it might continue to flourish, if delivered from this natural enemy. The fields destined for it were ploughed about the beginning of October, and allowed to mellow during the winter; then ploughed a second time in the beginning of February, all the stones carried off, and the clods pulverized; then ploughed a third time in March, and harrowed; then beds 10 feet broad and 50 feet long were formed, so that water might easily be conveyed over the whole space, and access given to weeders; on each of these old dung was laid, and in this situation the lucerne was sown in the month of April, at the rate of three modii to the jugerum, or five pecks to the English acre, or somewhat more than six pecks to the Scotch acre. The seed was then immediately covered to prevent injury from the heat of the sun. It was afterwards cleaned with wooden rakes, and frequently weeded. It was then allowed to stand before the first cutting till some of the seed fell. At the first cutting the lucerne was given but sparingly to the cattle, lest the newness of the forage should hurt them, as it was apt to induce swelling, and create too much blood. After each cutting, it was frequently watered, and a few days after, when the plants began to bush, every kind of weed was carefully plucked up.

Great attention was also paid by the Romans to pasturage and meadows. Cato gives a decided preference to grass lands above others, because their produce was obtained with little risk and trouble. It was an ordinary saying of his, when asked what was that part of husbandry by following which one would become quickly rich,—“Grazed cattle well.” “Neither a low field with hollows,” says Columella, “nor a field broken with steep rising grounds, are proper for meadows, because the first contains too long the waters collected in the hollows, and the latter makes the water run off too quickly. A meadow should have a smooth surface, and so gentle a descent as to prevent either showers or the streams that overflow it from remaining too long. And if in any part of a field intended for a meadow, a pool of water should stand, it must be drained off, for the loss is equal either from too much water or too little grass.” Three kinds of soil are mentioned by Pliny as proper for meadows—soil well dunged, soil naturally moist, and soil capable of being watered, particularly by rain water from a highway. Old meadows were directed to be renewed by sowing the first year with turnips, then with corn, and the third year all trees and shrubs were to be carefully extirpated. Sowing the field with vetches and hay seed mixed together, then breaking the clods with hoes, levelling the surface with a hurdle, so that nothing may be left to interrupt the scythe of the mower, equally belong to making new meadows and to renewing old ones. Irrigation of meadows was frequently practised immediately after the first crop of hay was carried off, and the water was not suffered to stagnate, but gently carried off by drains. The way in which this was done was by raising the water of running streams to a level with the

top of the declivity, in the same way as it is raised for driving mills. It was then conveyed by sluices over the fields, and when necessary, drained off into the stream below. It was a practice with the Romans to burn their pasture grass in the month of August, in order to thicken the grass, renew it, and by burning the briars, prevent the bushes from shooting up into stalks. The meadows were twice cut, first in May, and then in August or September. Meadows were usually watered before the first cutting of hay. “Meadows ought to be watered,” says Pliny, “immediately after the equinox (vernal equinox) and the waters restrained whenever the grass shoots up into the stalk.” He also mentions another watering, immediately before cutting the hay. This watering was probably intended to make the grass easier cut. Virgil¹ directs that hay should be cut in the night time, and probably for the same reason, that the grass by the nocturnal dews might be made to resist the scythe, and be thereby more easily cut. The hay of the second cutting was denominated *fenum cordum*, late or autumnal hay. This kind of hay, along with poplar, elm, and oak leaves, and the after-cutting of the meadows, was given in winter for fodder to sheep. It would appear from Columella and Pliny, that it was reckoned one day's work for a man to mow a jugerum of meadow, and the same for another to bind 1,200 bundles of hay of four lbs. each. From this we may learn what was the average crop of good meadow land. The hay carried off the field was dried hay. Now, 1,200 bundles of dried hay make 4,800 Roman lbs. or 3,600 do. airdupois to the jugerum, or 5,825 lbs. airdupois to the English acre, or 7,322 lbs. do., or 327 stones Tiron to the Scotch acre. Besides this, there were the rakings of the meadows, the grass left by the mowers at first cutting, and the second or autumnal crop, all of which together must equal one half of the first crop, so that the annual average produce of the meadow crop would be 486 stones Tiron to the Scotch acre. No wonder, therefore, if the produce of meadows was reckoned very valuable by the Romans, and preferred to that of corn fields, most of which had but one crop in two years. Plants common to the Italian meadows, according to Pliny, were “trefoil, the best, next common grass, and the worst called *mimulus*; the hard *siliqua*, likewise, and the plant called *equisetis*, or horse-tail, are hated by the mower.” It was the practice of the Romans to cut their grass early, before it began to wither. In this they are judged by Dickson worthy of imitation, for by so doing, the hay is not only of a better quality, but less hurt is done to the land by the crop. There was very little difference between the mode of hay-making practised by the Romans and by us. The chief difference lay in this, that, when dried, the hay was put up in bundles, and placed as soon as possible under cover. After the first crop of hay was carried away, the Romans gave the field a second mowing, and cut what had been first left. This grass was called *sicilimentum*, or re-mown grass, to distinguish it from the *fenum* or first cut hay.

Pliny is the only author who mentions the scythe, and the method of mowing, but not in such a manner as to convey a full idea of either. Speaking of cutting meadows after har-

¹ Georg. lib. I. l. 239, 240.

² Lib. xviii. c. 23.

rest, he says, "This was more expensive to our ancestors; the whetstone from Crete, and from beyond the sea were the only ones known, and these could not put an edge upon the scythe without toil, wherefore the mower moved forward, having a horn with oil tied to his leg. In Italy there have been lately water whetstones, that grind iron like a file. But these soon become furred with green, and lose their power. Of scythes there are two kinds. The Italian is the shorter of the two, and manageable among bushes. In the extensive fields of Gaul they go a less expensive way to work, for they cut the long grass near the middle, and pass over the short grass. The Italian mower, on the other hand, cuts lower, and uses his right hand only." From this it appears, that the Gallic scythe was long, like ours, and used in the same manner, and that the Italian one was shorter, managed by the right hand only, and fit to be used among bushes, and where it was necessary to cut very low. The whetstones here mentioned are apparently the same as those used by us. By frequent rubbing upon the scythe, the pores are filled up by the juice of the grass that sticks to the scythe, and from this juice it also receives the green colour mentioned by Pliny. This, perhaps, might be prevented by rubbing the scythe with a cloth before the whetstone is applied; but the trouble of doing so is not necessary, as whetstones are both plenty and cheap.

The Romans were well acquainted with the various modes of enclosure used in modern times. Four kinds of these are mentioned by Varro, namely, natural fences, timber fences, fences after the form of military ramparts, and fences of mason work. Under these four kinds, he classes several sorts. The first of these is a live hedge made of planted thorns. The second is a dead hedge made of the timber of the country. Of this kind he enumerates three sorts, the last of which is a log fence. The military fence is a ditch and an earthen dyke. "This ditch," he says, "ought to be so large as to contain all the water that falls from the heavens, and with such a descent as to make the water pass from it out of the farm. The dike, besides, should have a ditch running along it in the interior, or be so high and steep as not to be easily passed over. This kind of fence is commonly made along highways and rivers. If these dikes have not ditches, they are by some called walls. The fourth kind of fence is a wall of mason-work, and is the best. Of this there are four sorts—one of stone, as in the Tusculan fields; another of burned bricks, as in the Gallic fields; a third of unburned bricks, as in the Sabine fields; and a fourth of earth and gravel compounded and compressed in frames, as in Spain and the lands about Tarentum."

When the art of grafting trees was discovered is not known. The operations of gardening were, for many ages, confined to lopping, pruning, and dunging plants, shrubs, and trees. If Macrobius could be depended on, the art of grafting vines was invented by Saturn, who taught the people of Latium this important discovery. In the days of Homer and Hesiod, the Greeks were ignorant of the method of grafting. In Hindostan and Persia there are a great variety of fruit trees, but they are almost all wild, and grafting is there unknown. The

same is the case in South America, where, though the varieties of fruit trees are immense, they still remain as Nature produced them. There is no mention of grafting in the writings of Moses, although that legislator is very full in his directions concerning the culture of fruit trees. Pliny tells us that the following accident suggested the method of ingrafting. A peasant designing to enclose his cottage with a pale fence, sunk some branches of ivy in the ground, and fixed the ends of his pales in these to make them last the longer. It happened that the pales took root, and put forth new shoots, hence he concluded, that they received sap and nourishment from these trunks of wood, the same as if they had been planted in the earth. "The reflections," says Pliny, "which were made on this event, occasioned the discovery of the art of ingrafting." In whatever way it originated, it was much practised in Italy long before the days of Virgil. Columella maintains the practicability of grafting any scion on any tree, and produces the union of an olive with a fig tree as an instance.

Vineyards were generally planted in spring and autumn, either on the slopes of hills, or on plains. Previous to planting, the ground was well trenched and cleaned, in furrows or in ditches, and the plants were then set in rows, either of a square form or of a quincunx. Vineyards, as fields, were divided by cross paths, called *semitæ* or bounding lines, whose breadth was determined by law. The vines were planted at different distances, according to the nature of the soil, usually at five feet, and sometimes at eight feet distance. But the Umbri and Marsi, who ploughed and sowed corn between the vines, planted them at the distance of 20 feet. The straight paths in vineyards led from east to west, and the transverse paths or *semitæ* from north to south. The former were directed by Pliny, to be 18 feet broad, and the latter 10 feet broad. The spaces between the transverse paths comprehended each the breadth of five pail, or *capita vitium*, distinct vines. They were planted thick in fertile ground and thinner on hills, but always *ad unguem* or in exact order. Virgil cautions in a particular manner against mixing wild olives with the vines, lest their unctuous bark should accidentally catch fire, and destroy the whole plantation. Vines when transplanted, according to Pliny, bore fruit two years sooner than those that were planted (*sata*.) When either vines or trees were transplanted, the Romans marked on the bark the way each stood, that it might point to the same quarter of the heaven in the place where it was set. When a vineyard was replanted, it was done with an iron hoe with two prongs, called *pastinum*. Vines were propagated by sets, or by layers or shoots, and by grafting and inoculating. In the first way, they were either planted with the roots in the ground, or by branches fixed in the ground and sharpened like stakes, or by pieces of the cleft wood. The method of layers was taught by nature, from the bramble or rubo, and was done by binding a branch and fixing it in the earth, without disjoining it from the parent vine, whence new shoots arose. This

5 Lib. xvii. c. 24.

6 Georg. lib. ii. v. 237. Pliny, lib. xvii. c. 22.

7 Lib. xvii. c. 22. s. 35. 8 Georg. ii. v. 277.

9 Georg. ii. v. 269—272. Col. de Arbor. xvii. 4. Pallad.

xix. 2.

10 Col. lib. iii. c. 18.

3 Lib. xviii. c. 23. 4 De Re Rustica, lib. i. c. 14.

method is greatly praised by Columella and others. These vine cuttings were planted in the ground, with knobs or protuberances on each side, like a small hammer, and hence were called *malleoli* by Columella.¹ The method of propagating vines by slips or shoots, is the method most in use in modern times. The vines when grown were supported by reeds, or round stakes, or by pieces of cleft oak or olive, not round, which served as props round which the tendrils twined. Each vine was supported by two reeds, with a stick or reed laid across, and the tying of the vines to it was effected by osier or willow twigs.² Sometimes a vine had but a single pole or prop to support it, without the jugum or cross pole; sometimes four poles, with a cross pole to each.³ When rearing, the vines were fastened to certain trees, as poplars and elms, whence those trees were said to be married to the vines.⁴ The palm tree, to which vines were never joined, is elegantly denominated *calebs platanius*. When the vines were too luxuriant, the superfluous shoots or twigs were lopped with the pruning-knife.⁵ To allow the vine to raise itself in the air, to spread from branch to branch, and to equal its consort elms and poplars in elevation and luxuriance, is beautiful to the eye and delightful to the fancy, but not so favourable to the quality of the vines, which become richer and stronger when the growth is repressed, and the energies of the plant are confined in a smaller compass.⁶ The vines supported by cross poles in dressing, were generally cut in the form of the letter X.⁷ Yet Virgil, after his laboured verses on the cultivation of the vine, prefers to it the cultivation of the olive, as much more easy, certain, and productive, and mentions the ceaseless toil of digging, dressing, and pruning the vineyard. He prefers the benefit derived from the olive and other plants useful to man, to those derived from the vine, the frequent source of crimes and blood.⁸ It may here be observed, that the peasants were accustomed to suspend on the branches of trees little heads of Bacchus, which were believed to take care of the vines, and confer fertility on them, and to which they turned themselves, as they were impelled by the winds, or by the power of the divinity; whence Virgil says,

Et quo cumque Deus circum caput egit honestam. 9

Where'er the god his face divine inclines.

This is mentioned by Spence, in his *Polymetis*, who saw in the Duke of Tuscany's collection at Florence, a figure of Bacchus thus suspended.

Wine was made anciently much in the same manner as it is now. The grapes were picked in baskets made of osier and stamped. The juice was squeezed out by a machine called *torculum*, or *prelum*, a press. *Torculum* was properly the whole machine, and *prelum* the beam that pressed the grapes. The juice was made to pass through a strainer called *saccus*,¹⁰ and then received into

a large tub or vat, called *lacus* by Ovid and the younger Pliny, or put into a large cask called *dolium*, made of wood or of potters' earth, until the fermentation was over. The wine which came without pressing was called *laticum mustum*, or *protropum*.¹¹ The mustum, or new wine, was clarified by mixing it with the yolks of pigeons' eggs.¹² The white of eggs is now used for the same purpose. Then it was poured out into smaller vessels or casks (*amphuræ* or *cadi*), containing nine English gallons each. These were usually made of earth, and hence called *testæ*.¹³ These casks were covered over with pitch or chalk (gypsum), and bunged or stopped up. Wine was also kept in leathern bags (*utres*) or skins.¹⁴ From new or unrefined wine, called *mustum* as above, a book not ripe for publication was called *mustaceus liber* by Pliny.¹⁵ On each cask its age was marked, or the name of the consul, at the time when it was made. Hence Horace¹⁶ speaks of the cask that was brought to light with himself, in the consulship of Manlius, or wine of the same age with himself, and of the loitering cask that bore its date from the consulship of Bibulus.¹⁷ The oldest wine was always put farthest back in the cellar. When emptying a cask it was inclined to one side, and the wine poured out, the Romans not using a spigot or siphon as we do; hence *volevere cadum*, to turn the cask upside down.¹⁸ Wine was sometimes refined by being fumigated in the smoke above a fire.¹⁹ Sometimes the wine cask was placed in the upper part of the house to be smoked.²⁰ Horace mentions a cask of wine as old as the Marston war, which was above 70 years before the date of his ode, and wine made in the consulship of Opimius, A. U. 633, was to be found in the days of Pliny, nigh 200 years after (*In speciem asperis mellis redactum*).²¹ In order to make wine keep, it was boiled when in the state of *mustum*, or new wine, down to one half.²² When thus reduced by boiling, it was called *vinum defrutum*, or refined wine; when it was boiled down to one-third it was called *sapa*, or savoury wine, from its rich juice.²³ This refined wine was put into other sorts of wine, to improve them and make them keep. To heighten the flavour of the wine, and give it a sharp taste, they mixed pitch and certain herbs with it, and then it was called *vinum medicamentum conditum* or *concinatum*, medicated or richly seasoned wine.²⁴ Horace says that the stern, rigid, virtuous Cato, was himself frequently warmed with wine, pure, unmixed wine. He mentions also one Aufidius, who was wont to mix honey with strong Falernian wine, in order to give it a stronger relish.²⁵ The strength of wine was sometimes lessened by making it pass through a strainer with snow in it.²⁶ It was also sometimes cooled by pouring snow water upon it.²⁷

11 Pliny, lib. xiv. c. 9. Col. xiii. 41.

12 Horat. Sat. ii. 4. 56.

13 Horace, Od. i. 50. The cask mentioned by Horace was a Grecian cask, which contained one half more than the Roman cadus.

14 Pliny, lib. xxviii. c. 18. 15 Epist. viii. 21.

16 Od. iii. 21, 4. 17 Od. xxviii. 8. and Od. ii. 1. 27.

18 Sat. ii. 8, 39, 40. 19 Horat. Od. iii. 8, 11.

20 Horat. Od. iii. 21, 7. See Pliny, lib. xvi. c. 1. s. 8. Martial, Ep. lib. iii. 21, 7. x. 36.

21 Lib. xiv. c. 4. s. 6. 22 Virg. Georg. i. v. 295.

23 Pliny, lib. xiv. c. 9.

24 Col. lib. xii. c. 19, 20, 21. Cato De Re Rust. 114, 115.

25 Sat. ii. 4. 54.

26 Martial, xiv. 103. Pliny, xix. c. 22. s. 28. xix. c. 2. 19.

27 Seneca and Martial.

1 Col. lib. xvii. c. 21.

2 Georg. ii. 26. Col. lib. iv. c. 30. s. 4. Pliny, lib. xvi. c. 37, s. 69.

3 Pliny, lib. xvii. c. 21.

4 Hor. Carm. lib. v. 2, 10. Id. Od. lib. iv. v. 30.

5 Cic. de Sen. c. 15. Georg. lib. xi. v. 368.

6 Eustace, vol. iv. p. 133. See also Pliny, lib. xvii. c. 27. 7 Col. lib. iv. c. 17. Athenæus, lib. iii. c. 7. p. 8. citing Antiphan.

8 Georg. ii. 454-7. 9 Georg. ii. v. 302.

10 Virg. Georg. lib. ii. v. 542. Martial, xii. 613. xiv. 104.

In the olden times of Rome wine was very rare, and was used chiefly in the worship of the gods. But as the Romans increased in wealth, the restraints imposed by the severity of the ancient laws were gradually removed, and the juice of the grape became the ordinary, because favourite, beverage. Hence vineyards were planted over all Italy, and in process of time, in the subjugated provinces also, wherever the soil or climate permitted. Not a vine was to be found in all Gaul or France so late as the days of Julius Cæsar; but so early after as the days of Strabo vines were numerous. The south of Gaul was particularly stocked with them, and they were even cultivated in the interior of the country: but there they did not ripen well. So intense was the cold to the north of the Cevennes (Mons Cebenna), that in the time of Strabo it was thought impossible to ripen them. This difficulty was, however, gradually vanquished, and there is reason to believe that the vineyards of Burgundy are as old as the age of the Antonines. Even in the days of Vespasian, Gaul was famous for its vineyards, and its wines were exported even to Italy itself. The wine merchants of Narbonne were famous for their knowledge in the art of adulterating wine, and employed all the dexterous methods of modern brewers in tinging it with smoke, colouring it, as was suspected, with herbs and noxious dyes, and even adulterating the taste and appearance with aloes.

The vine was introduced into Britain by the Romans, and probably it was transplanted from Gaul, as were those of the Allobroges in Franche Comte. These vines were peculiarly fitted for cold countries, and ripened even in the frosts of an advancing winter. They were of the same colour, and seemingly of the same species, with the black Muscadines of the present day, which have been lately tried in this island, and found to be best fitted to this climate. It was about the middle of the third century that they were brought over to our island, when they had become numerous over all Gaul. They became very common in England after their introduction by the Romans, and from the name of vineyard yet adhering to the numerous sites of old castles and ancient monasteries, there seem to have been few of these in the country but what had a vineyard belonging to them. The county of Gloucester is particularly commended by Geoffrey of Malmesbury in the twelfth century, as exceeding all the rest of the kingdom in the number and goodness of its vineyards. In the earlier periods of our history the Isle of Ely was expressly denominated the Isle of Vines by the Normans. Vineyards are frequently mentioned in the descriptive accounts of Domesday Book, and those of England are mentioned by Bede as early as the commencement of the eighth century. Domesday Book exhibits to us a particular proof that wine was made in England in the time preceding the Norman Conquest. After that event the Bishop of Ely appears to have received at least three or four tuns of wine annually from the produce of the vineyards in his diocese, and to have made frequent reservations in his leases of a certain quantity of wine for rent. A plot of ground in London, now forming East Smithfield, and some adjoining streets, was withheld from the religious house within Aldgate, by four successive constables of the Tower, during the reigns of Rufus, Henry, and Stephen, and made by them into a vineyard,

to their great emolument and profit. In the old accounts of rectorial and vicarial revenues, and in the old registers of ecclesiastical suits concerning them, the title of wine is an article that frequently occurs in Kent, Surry, and other counties, and the wines of Gloucestershire, within a century after the conquest, were little inferior to the French in sweetness.

Virgil enumerates Lesbian, Egyptian, Thasian, and Pythian wines, as all different from those of Italian growth. The Lesbian wine was praised by almost all the ancients, as Strabo, Horace, Athenæus, and Ælian, for its exquisite flavour, and it still keeps up its ancient reputation. Alcæus and Sappho, Arion and Terpander, Pittacus and Theophrastus, have immortalized its name. We are told that when it was referred to Aristotle, in his dying moments, by his disciples, whether Menædemus the Rhodian or Theophrastus the Lesbian should succeed him, he called for wine of both islands, and, having tasted them, said, that both were excellent wines, but that the Rhodian was not comparable to the Lesbian, intimating by this, that Theophrastus as much exceeded his competitor as the wine of Lesbos did that of Rhodes.

The Rhetian wine is much commended by Cato and Pliny. According to Suetonius, Rhetian wine was the favourite beverage of Augustus Cæsar. By Rhetian vines, I suppose Virgil intends those that grew on the southern slopes of the Rhetian Alps, fronting Italy, not the north exposure, fronting the Grisons and Tyrol, or the upper valleys of the Rhine and Inn rivers. The northernmost part of the Valteline, which I suppose to be the Rhetia of Virgil, is covered with vines to a considerable height, and wine is still the chief product of that valley. The Rhetian wine even yet maintains its wonted celebrity, and would still be the best in Europe, if the inhabitants endeavoured less to make it of a very dark colour. The best wine of the Valteline is reckoned equal to Malmsey, and is said to keep for a century. The strength of the Valteline or Rhetian wine is owing to the situation of the vineyards, which lying east and west, have the sun upon them all day.

The Falernus Ager, or territory of Falernum, where the celebrated wine of that name was produced, lay beyond the Liris or Gargigliano, and was enclosed by the sea, Mount Massicus, Callicula, and the river Volturnus. Virgil says the Amminæan wines were superior to those of Mount Tmolus and Phænæus. The former was a mountain of Lydia, in the vicinity of Sardis, and was famed for saffron and vines. For its saffron it is praised by Virgil in his first Georgic.²⁸ Phænæus was a promontory of Chios, and hence, under that epithet, Virgil intends a species of Chian wine. This must not be confounded with another kind of Chian wine praised by Virgil in his fifth pastoral, under the epithet of Arvisian wine, and which he compares to the nectar of the gods: it was so called from the Arvisian fields, which lay on the north side of the island. The wine squeezed from the grapes of these charming fields, were called by Silius Italicus, Arvisian ambrosia.²⁹ Strabo prefers this wine to all the wines of Greece.³⁰ It is frequently mentioned by Pliny, who quotes Varro to prove that it was often prescribed at Rome as an excellent stom-

28 v. 56.

29 Lib. vii. v. 219.

30 Lib. xiii. p. 446.

achic. The celebrated Hortensius the orator, and rival of Cicero, left, at his death, 10,000 casks of this wine. Julius Cæsar used to regale his friends with the Arvisian wine in his public entertainments, that wine being, according to Athenæus, an excellent digester, very wholesome, and surpassing all other wines in taste and flavour. Hence we may see the reason why the Romans were so fond of it, and why so many medals of Chios have representations of bunches of grapes, casks, and other implements for making wine.¹ According to Theophrastus, himself a Chian, Cænopion, the son of Bacchus, taught the Chians how to cultivate the vine, and they taught the rest of mankind. Athenæus says, that the first red wine was made in that island. Chios, or the modern Scios, still represented as the paradise of modern Greece, was more productive than any other island, and yielded to none in grandeur of scenery. Yet though the Chian wines were so praised, Virgil has reckoned them inferior to the Amminean wines; even another species of foreign wines, called the Lesser Argite, is made by him to yield the palm to the Amminean, though far surpassing all others. There were two kinds of Argite wine, according to Columella,² the greater and the lesser Argite, of which the latter excelled the former in excellence. From what origin the epithet of *Argite* was derived, is uncertain, some thinking it so called because it was a species of white wine, from *argos*, white; others from Argos in Peloponnesus. Virgil thus mentions the Rhodian wine, and the grape called bumastus:

Non ego te, mensis et Diis accepta secundis,
Transierim Rhodia et tumidis, Bumaste, acemias.
v. 101, 102.

Nor be thou Rhodian, lov'd of gods, unsung,
Or swelling clusters, from Bumastus sprung.
Schely, v. 135, 136.

The poet here refers to the custom of setting down wine on the second table, with the dessert, consisting of apples, pears, and other fruits. These wines were denominated *Diis accepta*, because, before drinking, they invoked the gods, taking the cups in their right hands, and pouring out libations to them.³ The grape Bumastus was so called because it was a large grape, resembling a cow's udder. It is called Bumamma by Varro, and Bumammia by Columella and Pliny.

Of upwards of 80 wines celebrated by the ancients, more than two-thirds were produced in Italy.⁴ In addition to those mentioned by Virgil, of Italian growth, he mentions Massic wine, under the epithet of the *Massica Bacchi munera*,⁵ which was sometimes given to oxen after their labours. It is denominated oblivious Massic by Horace.⁶ Cæcuban, Calenian, Falernian, and Formian wines are mentioned by the same poet, in his ode to his patron Mæcenas, and which were far superior to the Sabine wines in strength, flavour, richness, and durability. Other Italian wines were the Alban, Setine, Sorrentine, &c.⁷ Other celebrated foreign wines were Leucadian, Mellan, Mamer-

tine and Naxian wines. These last are compared by the poet Archilochus, as quoted by Athenæus, to the nectar of the gods; and Asclepiades, cited by Stephanus, (Deurbibus,) tells us that Bacchus took more delight in Naxos than in any other place whatsoever, having himself taught the inhabitants to cultivate their vines. Bacchus seems, indeed, to be still the patron god of the island, as the inhabitants are at this day much addicted to drinking, and the wine of Naxos is still esteemed the best in the Levant. Almost all the medals and gems of the island relate to the jolly god, and prove how prevalent his rites once were.

In pasturing sheep the Romans pursued a custom similar to that which still prevails in Spain in the management of the Merinos. Flocks of sheep, which had pastured during winter on the slopes of the Apennines, were driven to a great distance from that region to pass the summer in Samnium, and mules were led from the champaign grounds of Rosea to the high Gurgurian mountains. Virgil praises the Lybian shepherds, who roamed with their flocks from place to place, living a free erratic life. Having contrasted the Lybian shepherds and flocks to those of the cold and frozen Scythia, he directs the Italian shepherd, if wool be his object, to restrain his flock from thorns, the brier and caltrops, both species of the thistle, and to avoid the rich and open plain, and drive from his flock the rams that have black spots under their tongue and palate, as their offspring would in that case be black. If milk was the object of the shepherd, the sheep were to be plentifully fed with the lotus and shrub trefoil, and salt was to be abundantly given them. Cheeses were made of the milk of sheep and goats, and carried, as Virgil says, to the neighbouring villages for sale. The Italian peasants still carry the curdled milk to market in baskets of green rushes closely interwoven. The dogs selected for protecting the sheep were to be well fed on whey, and were generally of the Molossian and Spartan breed, reckoned the best in Greece, remarkably fierce and large, and as highly valued then in Italy as the Spanish dogs are in modern times. Miletus in Ionia was famous in antiquity for its breed of sheep, and the fineness of their fleeces. Hence it is celebrated by Virgil.⁸ It is also mentioned by Cicero in his oration against Verres: *Quid a Milesiis lana sustulerit?* "What wool has he not taken away from the Milesians?" Tertullian, de Pallio, mentions the sheepfolds of Miletus, along with those of Selga and Altinum:—*Nec de ovilibus dico, Milesiis, Selgicis et Altinis*. Speaking of female dress, Milesian sheep are again mentioned by this austere father of the church:—*Age nunc, si ab initio rerum et Milesii oves tonderent et Seres arbores nerunt*. "Tell me now if from the beginning of the world the Milesians clipped sheep, and the Seres combed trees." We are told by Athenæus,⁹ that Polycrates, the tyrant of Samos, in his search after whatever was most curious and excellent in its kind, collected dogs from Epirus, she-goats from Scyros, and sheep from Miletus. But Columella prefers Gallican sheep to those of Miletus:—"Our ancestors had a high opinion of Milesian, Calabrian, and Apulian sheep, but those of Tarentum were esteemed the best." "The Gallican sheep are now reckoned of greater value, and chiefly those of Altinum." This town stood in Gallia

¹ See the 15th and 16th plates of Goltzius on those of the Greek islands.

² Lib. iii. c. 2.

³ Aïn. lib. viii. v. 274—75. Id. ib. v. 283—84.

⁴ See them enumerated by Pliny, lib. xiv. c. 6. & 8.

⁵ Georg. lib. iii. v. 325.

⁶ Carm. lib. ii. Od. vii. v. 51.

⁷ Pliny, lib. xxiii. c. 1. & 20.

⁸ Georg. lib. iii. 306, 7. and iv. 334, 5.

⁹ Lib. xii.

Transpadana, but is now in ruins, and called Altino Rouinata. Pliny, on the other hand, gives the preference to the Apulian sheep in the following words:—*Lana laudatissima Apula, et quæ in Italia Græci pecoris appellatur; alibi Italica: Tertium locum Milesia oves obtinent.*¹⁰ Here the Apulian obtain the first rank, the Grecian breed the second, and the Milesian the third. Horace seems to give the preference to the Gallic sheep.¹¹ Yet the rich and refined Sybarites, a Greek colony in Magna Græcia, who were very acute in matters of taste and luxury, were of a quite different opinion from the Romans. Despising the Apulian and Tarentine wool, which was produced in their immediate vicinity, they imported Milesian wool, as we are informed by Athenæus.¹² The prophet Ezekiel, describing the commerce of Tyre, mentions white wool as one of the articles. This wool Bochart supposes to be Milesian, or the wool which is called Milat in the Chaldee. In the Greek translation it is rendered wool from *Miletus*.

In order to preserve the whiteness of the fleece, the Apulian sheep were clad with skins, as we learn from Horace and Varro.¹³ A similar practice prevailed among the people of Megara; for Diogenes, the cynic, seeing the sheep among the Megarians clad with skins, and the children naked, said, "It was better to be a ram, than to be a son of a Megarian." It was the custom with the Hebrews to have their sheep clad in a similar manner, that the wool might equal the Milesian in whiteness, purity, and softness; for the word Milat with the Hebrews did not merely denote Milesian wool, but any other wool that might vie with it in the qualities above mentioned. The wool was frequently dyed with Tyrian purple; but Virgil shows his contempt of spoiling the native whiteness of wool with that expensive colour:—

Alba neque Assyrio fucatur lana veneno.

Nor is thy white wool soiled with Tyrian dye.

Georg. l. v. 465.

Hogs were fed by the Romans on acorns, beans, and barley, and, like our own, indulged freely in the use of mire, which, according to Varro, is as refreshing to them as water is to human creatures. But the Romans did not rear as we do a solitary, ill-looking pig in a sty, but possessed great herds of them, amounting sometimes to two or three hundred in number. The Lucanian forests fattened large droves of wild hogs, and afforded a plentiful supply of pork to the inhabitants of Rome.

The Romans paid great attention to the rearing of bees, and Virgil has devoted an entire Georgic to that subject. Though bees are inhabitants of almost every region and every clime, yet the conceited Athenians maintained that their own Attica was the original seat of the bees, who lived from immemorial time in mount Hymettus, and that all other bees were but colonies, successively sent at convenient times from the parent hive. It is impossible to ascertain the period when bees began to be kept in hives in order to obtain the produce of their labours. The Greeks, and their imitators the Romans, attributed this to Aristæus, son of Apollo, and the nymph Cyrene, the daughter

of the river god Proteus. This mythic personage is said to have invented a number of other arts besides that of extracting honey from bee-hives, as the art of making oil and cheese. In this character, as the inventor of curdling milk and planting olives, he is invoked by Virgil in his first Georgic.¹⁴ He is said by Pliny to have invented mill-stones for grinding the olives,¹⁵ and to have taught the Thracians the art of mixing honey with wine.¹⁶

According to the ancients, bees proceed from putrid oxen, and hence they are called bull born, *Georgiæ*. In the xiv. chapter of Judges we read, that Samson, after having rent a lion, turned aside to see the carcass of the lion, and behold there was a swarm of bees and honey in the carcass of the lion. According to Virgil, Aristæus, as directed by the god Proteus, sacrificed four bulls and four heifers to the shade of Orpheus, and that on the ninth dawn after the sacrifice, swarms of bees, generated in the putrid carcasses, arose in myriads, and settled on the neighbouring trees. But it is plain, from the account of the poet, that Aristæus had hives of bees before, and had lost them by disease and famine; and therefore we are still left in the dark how he obtained his first hives, if true that he first discovered the art of collecting bees and managing them. Like the rest of the ancients, Virgil believed the doctrine of equivocal generation—an absurdity alike hostile to religion, reason, and experience. Pliny, Aristotle, and others, imagined that there was a substance found in flowers by the bees which served in place of semen, and that this, formed into a fetus, was dropt by them from the mouth.

According to Pliny, it was a great and difficult question amongst the learned, how bees propagated, as they were never seen to copulate, and it was therefore concluded that the race was renovated in the manner above mentioned. What was then considered mysterious respecting this subject, has been satisfactorily rendered clear by the researches of Mr. Huber, who has demonstrated the truth of the opinion of Linnæus, that the queen bees formed an actual union with the drones, and who even suspected that this union proved fatal to the latter. The fact is, that the moderns, after all the labours of Swammerdam, Schirach, Hattorf, Maraldi, Debray, and our countryman Bonner, with the single exception of the sagacious Linnæus, were as ignorant of the matter as Virgil, though they had not recourse to the absurd hypothesis of equivocal generation like him and the other ancients. That bees are never seen to copulate, as Pliny has remarked, is true; for impregnation is never accomplished within the hive, but without in the region of the air. Huber found, from many experiments, that the young queen bees are never impregnated so long as they remain in the interior of the hive. If confined within its walls, they remain barren though amidst a seraglio of males. To receive the approaches of the male, the queen bee soars high in the air, choosing that time of day when the heat has induced the males to issue from the hive, and love is now ascertained to be the only motive of the only distant journey which a queen bee ever takes. From this excursion the queen bee returns in the space of half an hour, with all the evident marks of fecundation; for, far from being satisfied with the *aura seminalis* of Swammerdam, she actually

¹⁰ Lib. viii. c. 48.

¹² Lib. xii.

¹¹ Od. iii. 16, 35.

¹³ Lib. ii.

¹⁴ v. 14.

¹⁵ Lib. vii. c. 56.

¹⁶ Lib. xiv. c. 4.

carries away with her the very *verenda* of the poor drone, who never lives to see his offspring, but falls a sacrifice to the momentary bliss of his aerial amour. There are generally from 1500 to 2000 males in a hive, while there are only two or three queens to be impregnated in a season. Huber assigns a reason for this prodigious disproportion of males, by observing that as the queen is obliged to traverse the expanse of the atmosphere, it is requisite that the males should be numerous, that she may have the chance of meeting one of them. Agreeably to Pliny's remark, the infant bee comes forth from the egg after three days in the vermicular state, in which it remains five days, and then the working bees close up its cell with a waxen covering. Thirty-six hours are then passed in which the worm spins its cocoon, after which it becomes a nymph, and then passes six days in this state. It is only on the 20th day, from the time the egg is laid, that it attains the fly state. The royal bee also passes three days in the egg state, five in the vermicular state, and spins its cocoon 24 hours. In two days and 16 hours after this, during which it remains in a state of perfect repose, it is transformed into a nymph, in which state it passes 4½ days, and then arrives at the rank of queen on the 16th day. The male or drone bee is also three days in the egg, 6½ days a worm, and transformed into a bee on the 24th day. Every hive, of course, contains three kinds of bees—a single queen bee, distinguishable by the great length of her body, and the proportional shortness of her wings; working bees, to the number of many thousands, which are the smallest bees in the whole hive, and are armed with a sting; and thirdly, drones or males, to the number of 1500 or 2000, as stated already. These are larger than the workers, darker in colour, make a greater noise in flying, and have no stings. The whole work of the hive is performed by the workers; they elaborate the wax, construct the cells, collect the honey, and feed the brood. The males, however numerous, serve no other purpose than to impregnate the few young queens that may be produced in the course of a season, and are regularly massacred by the workers in the commencement of autumn, as *solum consumere nati*. No mention of a queen bee occurs in Virgil. In describing the internal faction of the hive, he represents them as headed by rival kings. Now no combats are held in hives, unless on the production of a supernumerary queen, when either she or the rightful owner soon perishes. The combat is only between the rival claimants. The bees recognise the individuality of their own queen. If another be palmed upon them, they seize and surround her, so that she is either suffocated or perishes by hunger; for the workers never attack a queen bee with their stings. The drones are not driven from the hive, as Virgil supposed, by the united force of the workers, but are massacred by their stings. This, however, is not done by a blind or indiscriminate instinct; for if a hive be deprived of its queen, the drones are suffered to survive over winter. They are also permitted to live in fertile hives, that have no proper queen, and even in hives governed by a queen whose impregnation has been retarded, or who lays only the eggs which produce droppings.

The sagacity of bees is astonishing, and has excited the admiration of all ages and of every observer. The young queen bees would in common course go off from their cells, as workers and drones do, but the bees always keep them

prisoners for some days in their cells, supplying them in the mean time with honey, a small hole being made in the door of each cell, through which the confined bee extends its proboscis to receive the food. The royal prisoners continually utter a kind of song, with varied modulations. When a young queen does at last go out, she meets with rather an awkward reception, being pulled, bit, and chased, whenever she happens to approach the other royal cells in the hive. This seems to be purposely done, that she may be impelled to go off with a swarm as soon as possible. A curious fact has been observed on these occasions. When the queen found herself much harassed, she had only to utter a peculiar noise, and all the bees were instantaneously silent, submissive and obedient. The beautiful composition of their cells, and relative position of their combs, have called forth equal admiration. The most dexterous artists must view with hopeless emulation, the hexagons and pyramids of these cells. These hexagons are closed by a pyramid. The angles of the three sides of a similar pyramid, such as would accomplish the given end with the smallest quantity possible of materials, was determined by the ablest of modern mathematicians, Maclaurin, if I am not mistaken, at one hundred and nine degrees, twenty-six minutes for the larger, and seventy degrees, thirty minutes, for the smaller. The actual measure is one hundred and nine degrees, twenty-eight minutes, and seventy degrees, and thirty-two minutes! Astonishing harmony! which can be resolved into nothing but the ruling power and continuous energy of the Infinite Geometer. The distance between each comb, when measured is found to be four lines. Were they farther distant, the bees would be much dispersed and unable to communicate reciprocal heats; if nearer, the intervals could not be freely traversed, and the work of the bees would suffer.

Virgil, in conformity to Aristotle, states two seasons for making honey, the spring and autumn. To make the harvest of the bees as abundant as possible, the ancients were accustomed to change their stations. When the vernal pastures were consumed, the bees were moved to climes more favourable to the bloom of autumnal flowers. From Achaia to Attica, from Eubœa and the Cyclades to Scyros; and in Sicily they were brought to Hybla, from other parts of the island. The ancient custom in Egypt is still preserved of embarking the bee hives at the end of October on the Nile, and conveying them to Upper Egypt, where it was observed, all plants, blossoms, and fruits, ripen sooner than in the Delta. In the Taurica Chersonesus, bees were kept in cylindrical hives made of the bark of trees. Cyprus has been always famous for its apiaries, which are also cylindrical, but not made of the bark of trees, but of earth. The Cypriotes build a wall entirely formed of earthen cylinders, each about three feet long, placed horizontally, one above the other, and closed at their extremities with mortar. The wall is then covered with ashes, and upwards of 100 hives may thus be maintained within a very small compass. Those of Egypt and Palestine are similarly constructed; and Hasselquest, the Swedish traveller and botanist, saw several thousands of these hives at a village between Damietta and Mansora.

Amongst the enemies of the bee, Virgil places the bird called *Merops*, or the bee-eater, and the swallow. The bee-eater is about the size of a

blackbird, and shaped like a kingfisher. The bill is like that of the halcyon kind, but somewhat more crooked; the feet exactly like the kingfisher's; the top of the head reddish; neck and shoulders green, with a mixture of red. It is found in Italy, but observed to be most numerous in Candia or Crete. Mr. Bruce mentions two species of the *Merops*, or bee-eater, called sheregrig, and found in Syria, Arabia, and in the low country of Abyssinia, on the borders of Sennaar, wherever there are meadows or long grass interspersed with lofty and shady trees. The two species vary considerably from each other, and seem also to differ from that common in Italy. The sheregrig devours equally bees and flies wherever it can catch them, whether in the woods, upon the trees, or in holes in the ground, among the long grass. Another bird called moroc by Bruce, but different from the *Merops* of Italy, or the sheregrig, above mentioned, is a great enemy to the bees, and to them only, not to flies. It pursues the bees for vengeance as well as for food, as it leaves a great number of them scattered dead on the ground, without seeking farther after them, and even sometimes pursues them all day long unweariedly. It is in shape and size like the cuckoo, but differs from him in other respects. It does not inhabit the low country like the sheregrig, but the mountain country of Abyssinia, especially in the district of the Agows, near the source of the Abyssinian Nile, in Goutto, and Belessen, where honey is exceedingly abundant, and forms part of the royal revenue.

In describing the circumstances unfavourable to the production of honey, and of those natural productions calculated to poison it, Virgil mentions yew trees and crabs. The yew trees have been always accounted poisonous; and in the ninth eclogue, Virgil mentions the yew of Corsica, as particularly injurious to bees. Bees feeding on this tree make very bitter honey, whence Corsica (called *Cyrnus* by the Greeks,) is famed, or rather infamous for deleterious honey, because it abounds in yews and hemlock.¹ The mountain thyme, mentioned by Virgil is not our common thyme, but known among us under the name of the true thyme of the ancients. To this thyme the Attic honey was indebted for its celebrity, and also the honey of Hybla in Sicily. "Their favourite food," says Clarke, speaking of the *Hymettian* bees, near Athens, "is the wild thyme, *leptomeris*, *thymus serpyllum* of Linnæus, which grows in almost every variety, abundantly upon the mountain, together with *salvia pomifera* and *salvia verbasum*, and to this circumstance may be owing the very heating quality of the Attic honey. The powerful aromatic exhalation of these plants, fills the air with a spicy odour, and peculiarly distinguishes the mountains of Attica." Mr. Kirby, in his Monography of English Bees, has described above 220 species, all natives of England. Our Scottish climate is unfavourable to the cultivation of bees, and is inferior in this respect, not only to the favoured climates of France, Italy, and Greece, but even to that of Denmark or Russia; for, in these latter countries, the bees remain during the whole winter in an almost torpid state, and never leave their hives till the frost has fairly broken up, when, as is well known, the genial season immediately com-

mences, and continues steady for several months. With us, on the contrary, the great variability of the weather during the months of March, April, and May, opposes almost insurmountable obstacles to the extensive cultivation of bees. Virgil's method of destroying the bees, by smoking the hive, and then taking possession of the honey, is deprecated by Huber, who recommends the cultivator of bees to be content with a reasonable share of the wealth of the hive, arguing very justly, that a little taken from each of a number of hives, is ultimately much more profitable than a greater quantity taken by the total destruction of a few. Those who follow the old method, annually lose an immense number of hives, and spring being generally unfavourable to swarms, the loss is irreparable.

After the time of Pliny, agriculture, in all its various branches, continued gradually to decline. The growing inequality of landed property, the increase of slave labour, accumulation of taxes, and the mode in which they were levied by the successors of Constantine; the insecurity of property, arising from despotism, on the one hand, and the repeated inroads of the barbarians, on the other, combined to hasten the decline of an art so essential to human subsistence. The middle ranks of society, who derive their subsistence from their ingenuity or industrious enterprise and are therefore the most useful and truly respectable class of the community, gradually disappeared, and the great body of the population consisted only of two classes—the opulent and the indigent. The commons of Rome, which was proudly denominated the Eternal City, and the Capital of the Universe, sunk under the tyrannic sway of the Cæsars, into a mean, degraded, and wretched populace, continually increased by the manumission of slaves and the influx of strangers. The successors of Constantine changed the monthly allowance of corn, granted this lazy and dissolute class, into a daily allowance of bread. A great number of ovens were built and maintained at the public expense; and at the appointed hour, each fellow dignified with the epithet of *citizen*, and possessed of a ticket, ascended the flight of steps assigned to his peculiar ward, and received as a donative, or if not, at a very low price, a loaf of wheat bread of three pounds weight, for the use of his family. During five months of the year, a regular allowance of bacon was distributed to the poorer citizens; and the annual consumption of that article, at Rome, in the reign of Valentinian the third, when it had much declined from its former grandeur, was ascertained to be 3,628,000lbs. Africa was annually taxed for the benefit of Rome, in 3,000,000 congii of oil, equivalent to 21,000,000 English pints, according to Arbuthnot's Tables, or 27,000,000, according to Dr. Smith, which was annually distributed among the people for the purpose of light, and for illuminating the public baths. The use of wine was also allowed them on very easy and liberal terms. The emperor Aurelian had designed to plant vineyards along the sea coast of Tuscany, and bestow their produce gratis on the population of Rome, but his design was frustrated by death. The administration of the public cellars, however, was delegated to a magistrate of considerable rank, and a large portion of the wines of Campania was allotted to the populace of Rome, and this at a time when the price of wine was fixed at sixteen pence the gallon of eight pints. Thus the numerous and idle

¹ Ovid, de Arte Amoris, lib. i. 12. 10.

habitants of Rome were supplied with bread, bacon, oil, and wine, by their emperors, at the expense of the provinces, to the utter ruin of all morality and industry. As agriculture could not but decline under a state of society, where it was wholly or chiefly managed by slaves, or indigent peasants, who had no personal interest in the cultivation of the soil, so also was its decay hastened by the financial measures of Constantine and his successors, who preferred a simple and direct mode of taxation to the former mode pursued by the successors of Augustus. The whole landed property of the empire, even the patrimonial estates of the monarchy, was subjected to a direct tax, and every new purchaser contracted the obligations of the former proprietor. An accurate census or survey was the only equitable way of ascertaining the proportion which each citizen and landed proprietor should contribute to the support of the state, and this difficult, laborious, and expensive operation, was repeated at the regular distance of fifteen years. The lands were measured by surveyors, who were sent into the provinces. Their nature, whether arable or pasture, or vineyards and woods, was distinctly reported, and an estimate was made of the common value from the average produce of five years. The number of slaves and cattle made an essential part of the report: every proprietor was bound to disclose the state of his affairs upon oath, and every attempt to prevaricate, or elude the intention of the law, was severely watched, and punished as a capital offence, because it included the double crimes of treason and sacrilege. A large portion of the tribute was paid in money, and of the current coin of the empire gold alone could be legally accepted. The remainder of the taxes, according to the proportions determined by the annual indiction, was furnished in a manner still more direct, and therefore more oppressive. According to the different nature of lands, their real produce in the various articles of wine, oil, corn, wood, and mineral productions, was transported by the labour, or at the expense of the proprietors, to the imperial magazines, whence they were occasionally distributed for the use of the court, of the army, and of the two capitals, Rome and Constantinople. The commissioners of the revenue were so frequently obliged to make large purchases, that they were strictly prohibited to allow any thing in the way of compensation, or from receiving in money the value of those supplies which were exacted in kind. This mode of raising the annual supplies, could not fail of diminishing the value of landed property, and depressing the spirit of agriculture. In the progress of despotism, which always tends to defeat its own purpose, the emperors were compelled in several instances to remit tributes which their subjects were utterly unable to pay. Within 60 years after the death of Constantine, and on the evidence of an actual survey, an exemption from tribute was granted in favour of 528,042 jugera, or 330,000 English acres of land, which lay desert and uncultivated in the rich and fertile province of Campania, reaching, according to the new division of Constantine, from the Tyber to the Silarus. This exemption was passed by an edict of Honorius, published the 24th of March,

A. D. 395. As no hostile inroads of the barbarians had yet reached Italy, the cause of this amazing desolation can only be ascribed to the administration of the Roman emperors.¹ In the reign of Julian, wheat was sold in the different proportions of 5, 10, and 15 modii or pecks for an aureus, or eleven shillings, according to the degrees of plenty or scarceness.² If we take 10 modii for an aureus as the medium or average price, wheat would be sold at the moderate price of 32s. per quarter. From this and other examples, Gibbon concludes, that 32s. the quarter was the average price of wheat under Constantine and his successors. This is only one half of what it was in the time of the Elder Pliny. Considering the direct tax on land itself, and its productions, besides the personal and heavy impost of the capitation tax on the proprietors, it is astonishing that its price was so low, compared with the period of Pliny, when no such direct and heavy taxes affecting agricultural produce existed. The cause can only be attributed to the immense supplies exacted from the provinces at a fixed rate; which supplies amounted to a tenth of the annual produce, as a part of the revenue, and which fixed price was no more than one sixpence the modius of wheat. These immense supplies distributed to the people at a very low price, and to multitudes of them gratis, must have contributed to sink the price of wheat at the expense of the cultivator, and must have gradually, but infallibly, tended to ruin the agriculture of Italy, and the industry of the people. Had a system of free importation of African and Egyptian grain into the Italian market, and that of Constantinople been pursued, it would have been advantageous to the agriculture of Egypt and Africa. But the cultivator of Egypt and Africa was neither allowed a fair price for his produce, nor compensation for the expense of carriage and transport. The practice, too, of distributing foreign grain gratis to the numerous and worthless population of Rome and Constantinople, deprived the cultivators in the vicinity of these cities of a market for their grain, crushed industry, nourished idleness, and produced indigence. Had a fair competition been allowed between the grain of Italy, Thrace, and Egypt, in the Roman and Constantinopolitan markets, it would have ensured a cheap and plentiful supply to the inhabitants of these capitals and their vicinity, without being injurious to the agriculture of any of these provinces. The same absurd system of supplying the citizens of the capitals with corn gratis was also extended to Alexandria in Egypt.

Thus far have we attempted to trace the progress of agriculture and pasturage, from their rude beginnings to that perfection which they attained amongst the Romans, the most industrious cultivators in the ancient world,—and thence down to the period of the gradual decline of the Roman empire, when the congregated hosts of Germany and Scythia, that successively rose in the political horizon, obscured the sun of Italy, and sunk the western world in night.

1 See Gibbon's *Decline*, &c. vol. ii. p. 321.

2 *Misopogon*, p. 369.

OF COMMERCE.

ARTICLE I.

Excellency and advantages of Commerce.

It may be said, without fear of being suspected of exaggeration, that commerce is the most solid foundation of civil society, and the most necessary principle to unite all men, of whatever country or condition they are, with each other. By its means the whole world is but one city, and one family. It is the source of universal plenty to every part of it. The riches of one nation, become those of all people, and no country is barren, or at least sensible of its sterility. All its necessities are provided for in time from the extremities of the universe; and every region is amazed to find itself abound in foreign productions, and enriched with a thousand commodities, unknown to itself, and which, however, compose all that is most agreeable in life. It is by the commerce of the sea and rivers, that is to say by navigation, that God has united all mankind amongst themselves in so wonderful a manner, by teaching them to direct and govern the two most violent things in nature, the sea and the winds, and to render them subservient to their uses and occasions.¹ He has joined the most remote people by this means, and preserved amongst the different nations, an image of the dependance he has ordained in the several parts of the same body by the veins and arteries. This is but a weak, a slight idea, of the advantages arising from commerce to society in general. With the least attention to particulars, what wonders might we not discover? But this is not the proper place for such inquiries.

I shall confine myself to one reflection, which seems very proper for our understanding, at once

the weakness and grandeur of man. I shall consider him at first in the highest degree of elevation to which he is capable of attaining. I mean upon the throne: lodged in superb palaces; surrounded with all the splendour of the royal dignity; honoured and almost adored by throngs of courtiers, who tremble in his presence, and vie with each other for his favour; placed in the centre of riches; and supported by numerous armies, who wait only to obey his orders. Behold the height of human greatness! But what becomes of this so powerful, so awful, prince, if commerce happens to cease on a sudden; if he is reduced to himself, to his own industry and personal endeavours? Abandoned to himself in this manner; divested of that pompous outside, which is not him, and is absolutely foreign to his person; deprived of the support of others, he falls back into his native misery and indigence; and to sum up all in a word, he is no longer any thing.

Let us now consider man in a mean condition, inhabiting a little house; reduced to subsist on a little bread, meat and drink; covered with the plainest clothes; and enjoying in his family, not without difficulty, the other conveniences of life. What seeming solitude, what a forlorn state, what oblivion seems he in with regard to all other mortals! We are much deceived, when we think in this manner. The whole universe is attentive to him. A thousand hands work for his occasions, and to clothe and nourish him. For him manufactures are established, granaries and cellars filled with corn and wine, and different metals extracted from the bowels of the earth with so much danger and difficulty. There is nothing, even to the things that minister to pleasure and voluptuousness, which the most remote nations are not solicitous to transfer to him through the most stormy seas. Such are the supplies, which commerce, or to speak more properly, divine providence, always employed for our occasions, continually procures for us all,

¹ Quæ res violentissimas natura genuit, earum moderationem nos soli habemus, maris atque ventorum, propter nauticarum rerum scientiam. *Cic. de Nat. Deor.* l. 2. p. 15.

for each of us in particular:—supplies, which to judge aright of them, are in a manner miraculous, which ought to fill us with perpetual admiration, and make us cry out with the prophet in the transports of a lively gratitude; “O Lord, what is man, that thou art mindful of him, or the son of man that thou visitest him!”¹

It would be to no purpose for us to say, that we lie under no obligation to those who labour for us in this manner, because their particular interest puts them in motion. This is true, but is their work therefore of less advantage to us? God, to whom alone it belongs to produce good from evil itself, makes use of the covetousness of some for the benefit of others. It is with this view providence has established so wonderful a diversity of conditions amongst us, and has distributed the goods of life with so prodigious an inequality. If all men were easy in their fortunes, were rich and opulent, who amongst us would give himself the trouble to till the earth, to dig in the mine, or to cross the seas? Poverty or covetousness charge themselves with these laborious, but useful toils. From whence it is plain, that all mankind, rich or poor, powerful or impotent, kings or subjects, have a mutual dependance upon each other for the demands of life; the poor not being able to live without the rich, nor the rich without the labour of the poor. And it is commerce, subsisting from these different interests, which supplies mankind with all their necessities, and at the same time with all their conveniences.

ARTICLE II.

Antiquity of Commerce. Countries and cities most famed for it.

It is very probable, that commerce is no less ancient than agriculture. It began, as was natural, between private persons, mankind assisting each other with whatsoever surplus they had of things useful and necessary to human life. Cain, no doubt, supplied Abel with corn, and the fruits of the earth for his food; and Abel, in exchange, supplied Cain with skins and fleeces for his clothing, and with milk, curds, and perhaps meat for his table. Tubalcain, solely employed in works of copper and iron, for the various uses and occasions of life, and for arms to defend men, either against human enemies or wild beasts, was certainly obliged to exchange his brass and iron works for other merchandize, necessary for his food, clothing, and lodging. Commerce afterwards, extending gradually from neighbour to neigh-

bour, established itself between cities and adjacent countries, and after the deluge, enlarged its bounds to the extremities of the world.

The holy scripture gives us a very ancient example of traffic by the caravans of the Ishmaelites and Midianites, to whom Joseph was sold by his brethren.² They were upon their return from Gilead with their camels laden with spices, aromatic goods, and with other precious merchandize of that country. These they were carrying into Egypt, where there was a great demand for them, occasioned by their custom of embalming the bodies of men, after their death with great care and expense.

Homer informs us, that it was the custom of the heroic age of the siege of Troy, for the different nations to exchange the things that were most necessary for life, with each other;³ a proof, says Pliny, that it was rather necessity than avarice, that gave birth to this primitive commerce. We read in the seventh book of the Iliad, that upon the arrival of certain vessels, the troops went in crowds to purchase wine, some with copper, and others with iron, skins, oxen, and slaves.

We find no navigators in history so ancient as the Egyptians and Phœnicians. These two neighbouring nations seem to have divided the commerce by sea between them: the Egyptians had possessed themselves chiefly of the trade of the East, by the Red Sea; and the Phœnicians of that of the West, by the Mediterranean. What fabulous authors say of Osiris, who is the Bacchus of the Greeks, that he undertook the conquest of the Indies, as Sesostris did afterwards, makes it probable, that the Egyptians carried on a great trade with the Indians.

As the commerce of the Phœnicians was much more to the west than that of the Egyptians, it is no wonder, that they are more celebrated upon that account by the Greek and Roman authors. Herodotus says, that they were the carriers of the merchandize of Egypt and Assyria, and transacted all their trade for them, as if the Egyptians had not employed themselves in it; and that they have been believed the inventors of traffic and navigation, though the Egyptians have a more legitimate claim to that glory.⁴ Certain it is, the Phœnicians distinguished themselves most by ancient commerce, and are also a proof to what an height of glory, power, and wealth, a nation is capable of raising itself merely by trade.

² Gen. xxxvii. 25.

³ Quantum feliciore ævo, cum res ipsæ permutabantur inter sese, sicut et Trojanis temporibus facilitatum Homero credi convenit! Ita enim, ut opinor, commercia victis gratia inventa. Alios coriis boum, alios ferro captivisque rebus emptitasse tradit. *Plin. l. xxxiii. c. 1.*

⁴ Herod. l. c. 1.

¹ Psal. viii. 4.

This people possessed a narrow tract of land upon the sea-coast, and Tyre itself was built in a very barren district; which had it been richer and more fertile, would not have been sufficient for the support of the great number of inhabitants, which the early success of its commerce drew thither. Two advantages made them amends for this defect. They had excellent ports upon the coasts of their small state, particularly that of their capital; and they had naturally so happy a genius for trade, that they were looked upon as the inventors of commerce by sea, especially of that carried on by long voyages.

The Phœnicians knew so well how to improve both these advantages, that they soon made themselves masters of the sea, and of trade. Libanus, and other neighbouring mountains, supplying them with excellent timber for building of vessels, in a little time they fitted out numerous fleets of merchant vessels, which hazarded voyages into unknown regions, in order to establish a trade with them. They did not confine themselves to the coasts and ports of the Mediterranean, they entered the ocean by the straits of Cadiz or Gibraltar, and extended their correspondence to the right and left. As their people multiplied almost infinitely by the great number of strangers, whom the desire of gain, and the certain opportunity of enriching themselves, drew to their city; they saw themselves in a condition to plant many remote colonies, and particularly the famous one of Carthage, which, retaining the Phœnician spirit with regard to traffic, did not give place to Tyre itself in trading, and surpassed it exceedingly in extent of dominion, and glory of military expeditions.

The degree of glory and power, to which commerce and navigation elevated the city of Tyre, rendered it so famous, that we could scarce believe there is no exaggeration in what profane authors report of it, if the prophets themselves had not spoke of it with still greater magnificence. "Tyre," says Ezekiel, to give us some idea of its power, "is a superb vessel. They have made all thy ship-boards of fir-trees of Senir; they have taken cedars from Lebanon to make masts for thee. Of the oaks of Bashan have they made thine oars: the company of the Ashurites have made thy benches of ivory, brought out of the isles of Chittim. Fine linen, with broidered work from Egypt, was that which thou spreadest forth to be thy sail: blue and purple from the isles of Elishah was that which covered thee. The inhabitants of Zidon and Arvad were thy mariners: thy wise men, O Tyrus, that were in thee, were thy pilots."⁵ The prophet, by this figurative language, designs to show us the power of this city. But he gives

with more energy a circumstantial account of the different people with whom it traded. The merchandises of the whole earth seemed to be laid up in this city, and the rest of the world appeared less its allies than tributaries.

The Carthaginians trafficked with Tyre for all sorts of riches, and filled its markets with silver, iron, pewter, and lead.⁶ Greece, Tubal, and Meshech,⁷ brought it slaves, and vessels of copper. Togarmah⁸ supplied it with horses and mules. Dedan⁹ with elephants' teeth and ebony. The Syrians exposed to sale in it pearls, purple, wrought cloths, lawn, silk, and all sorts of precious merchandises. The people of Judah and Israel brought thither the finest wheat, balm, honey, oil, and fruits. Damascus sent it excellent wine, and wool of the most lively and most exquisite dyes: other people furnished it with iron work, myrrh, the aromatic calamus, and carpets of exquisite workmanship to sit upon. Arabia,¹⁰ and all the princes of Kedar, brought thither their flocks of lambs, sheep, and goats. Sheba and Raamah,¹¹ the most excellent perfumes, precious stones, and gold; and others cedar-wood, bales of purple, embroidered clothing, and every kind of rich goods.

I shall not undertake to distinguish exactly the situation of the different nations, of whom Ezekiel speaks, this not being the proper place for such a disquisition. It suffices to observe, that this long enumeration, into which the Holy Spirit has thought fit to descend with regard to the city of Tyre, is an evident proof, that its commerce had no other bounds than the world, as known at that time. Hence it was considered, as the common metropolis of all nations, and as the queen of the sea. Isaiah paints its grandeur and state in most lively, but very natural colours, where he says, that Tyre wore the diadem upon her brows; that the most illustrious princes of the universe were her correspondents, and could not be without her traffic; that the rich merchants, enclosed within her walls, were in a condition to dispute precedence with crowned heads, and pretended, at least, to an equality with them: "Who hath taken this counsel against Tyre, the crowned city, whose merchants are princes, whose traffickers are the honourable of the earth."¹²

⁵ Ezek. v. 20—24.

⁷ Tubal and Meshech. The holy scripture always joins these two people. The latter intends Muscovy; the former, without doubt, was its neighbour.

⁸ Togarmah. Cappadocia, from whence came the finest horses, of which the emperors reserved the best for their own stables.

⁹ Dedan. The people of Arabia.

¹⁰ Arabia Deserta. Kedar was near it.

¹¹ Sheba and Raamah. People of Arabia Felix. All antiquity mentions the riches and spices of this people.

¹² Isa. xxiii. 2

⁵ Ezek. xxvii. 5.

I have related elsewhere the destruction of the ancient Tyre by Nebuchadonozor, after a siege of thirteen years; and the establishment of the New Tyre, which soon repossessed itself of the empire of the sea, and continued its commerce with more success, and more splendour than before; till at length, being stormed by Alexander the Great, he deprived it of its maritime strength and trade, which were transferred to Alexandria, as we shall soon see.

Whilst both the old and new Tyre experienced such great revolutions, Carthage, the most considerable of their colonies, was become very flourishing. Traffic had given it birth: traffic augmented it, and put it into a condition to dispute the empire of the world for many years with Rome. Its situation was much more advantageous than that of Tyre. It was equally distant from all the extremities of the Mediterranean sea; and the coast of Africa, upon which it was situated, a vast and fertile region, supplied it abundantly with the corn necessary to its subsistence. With such advantages those Africans, making the best use of the happy genius for trade and navigation, which they had brought from Phenicia, attained so great a knowledge of the sea, that in that point, according to the testimony of Polybius, no nation was equal to them. By this means they rose to such an height of power, that in the beginning of their third war with the Romans, which occasioned their final ruin, Carthage had seven hundred thousand inhabitants, and three hundred cities in its dependance upon the continent of Africa only. They had been masters not only of the tract of land extending from the great Syrtes to the pillars of Hercules, but also of that which extends itself from the same pillars to the southward, where Hanno, the Carthaginian, had founded so many cities, and settled so many colonies. In Spain, which they had almost entirely conquered, Asdrubal, Hannibal's father, who commanded there, after Barca had founded Carthagena, one of the most celebrated cities of those times. Great part also of Sicily and Sardinia had formerly submitted to their yoke.

Posterity might have been indebted for great lights to the two illustrious monuments of the navigation of this people, in the history of the voyages of Hanno, styled king of the Cathaginians, and of Imilco, if time had preserved them. The first related the voyages he had made in the ocean, beyond the pillars of Hercules, along the western coast of Africa; and the other his voyages on the western coast of Europe, both wrote by the order of the senate of Carthage. But time has consumed those writings.

This people spared neither pains nor expenses to bring navigation to perfection. That was their only study. The other arts and sciences were not cultivated at Carthage. They did not

pique themselves upon polite knowledge. They professed neither poetry, eloquence, nor philosophy. The young people, from their infancy, heard of nothing in conversation, but merchandise, accounts, ships, and voyages. Address in commerce was a kind of inheritance in the families, and was the best part of their fortunes; and as they added their own observations to the experience of their fathers, we ought not to be surprised, that their ability in this way always increased, and made such a wonderful progress. Hence it was that commerce raised Carthage to so high a degree of wealth and power, that it cost the Romans two wars; the one of twenty-three, and the other of seventeen years, both bloody and doubtful, to subdue that rival; and that at last, victorious Rome did not believe it in her power to subject her enemy entirely, but by depriving her of the resources she might still have found in trade, and which, during so long a series of years, had supported her against all the forces of the republic.

Carthage had never been more powerful by sea, than when Alexander besieged Tyre, the metropolis of her people. Her fortune began to decline from that time. Ambition was the ruin of the Carthaginians. Their being weary of the pacific condition of merchants, and preferring the glory of arms to that of traffic, cost them dear. Their city, which commerce had peopled with so great a multitude of inhabitants, saw its numbers diminish to supply troops, and recruit armies. Their fleets, accustomed to transport merchants and merchandise, were no longer freighted with any thing, but munitions of war and soldiers; and out of the wisest and most successful traders, they elected officers and generals of armies, who acquired them an exalted degree of glory indeed, but one of short duration, and soon followed with their utter ruin.

The taking of Tyre by Alexander the Great, and the founding of Alexandria, which soon followed, occasioned a great revolution in the affairs of commerce. That new settlement was, without dispute, the greatest, the most noble, the wisest, and the most useful design that conqueror ever formed. It was not possible to find a more happy situation, nor one more likely to become the mart for all the merchandise of the east and west. That city had on one side a free commerce with Asia, and the whole East, by the Red Sea. The same sea, and the river Nile, gave it a communication with the vast and rich countries of Ethiopia. The commerce of the rest of Africa and Europe was open to it by the Mediterranean; and for the inland trade of Egypt, it had besides the navigation of the Nile, and the canals cut out of it, the assistance of the caravans, so convenient for the security of merchants, and the conveyance of their effects. This induced Alexander to believe it a proper place

for founding one of the finest cities and ports in the world. For the isle of Pharos, which at that time was not joined to the continent, supplied him with the happiest situation, after he had joined them by a mole, having two entrances, in which the vessels of foreign nations arrived from all parts, and from whence the Egyptian ships were continually sailing to carry their factors, and commerce, to all parts of the world then known.

Alexander lived too short a time to see the happy and flourishing condition to which commerce raised his city. The Ptolemies, to whose share, after his death, Egypt fell, took care to improve the growing trade of Alexandria, and soon raised it to a degree of perfection and extent, that made Tyre and Carthage be forgotten, which for a long series of time, had transacted, and engrossed to themselves, the commerce of all nations.

Of all the kings of Egypt, Ptolemæus Philadelphus was the prince who contributed most to the bringing of commerce to perfection in his country. For that purpose he kept great fleets at sea, of which Athenæus gives us the number and description, that cannot be read without astonishment.¹ Besides upward of six score sail galleys of an extraordinary size, he gives him more than four thousand other ships, which were employed in the service of the state, and the improvement of trade. He possessed a great empire, which he had formed by extending the bounds of the kingdom of Egypt into Africa, Ethiopia, Syria, and beyond the sea, having made himself master of Cilicia, Pamphylia, Lycia, Caria, and the Cyclades, possessing almost four thousand cities in his dominions. To raise the happiness of these provinces as high as possible, he endeavoured to draw into them, by commerce, the riches and commodities of the East; and to facilitate their passage, he built a city expressly on the western coast of the Red Sea, cut a canal from Coptus to that sea, and caused houses to be erected along that canal, for the convenience of merchants and travellers, as I have observed in its place. It was the convenience of this staple for merchandise at Alexandria, which diffused immense riches over all Egypt; riches so considerable, that it is affirmed, the customs only for the importation and exportation of merchandise at the port of Alexandria, amounted yearly to more than thirty-seven millions of livres, though most of the Ptolemies were moderate enough in the imposts they laid on their people.²

Tyre, Carthage, and Alexandria, were, without dispute, the most famous cities of antiquity

for commerce: it was also followed with success at Corinth, Rhodes, Marseilles, and many other cities, but not with such extent and reputation.

ARTICLE III.

The end and materials of Commerce.

The passage of Ezekiel, which I have cited in regard to Tyre, includes almost all the materials in which the ancient commerce consisted: gold, silver, iron, copper, tin, lead, pearls, diamonds, and all sorts of precious stones; purple, stuffs, cloths, ivory, ebony, cedar, myrrh, aromatic reeds, or the calamus; perfumes, slaves, horses, mules, grain, wine, cattle, and, in a word, all kind of precious merchandise. I shall not dwell here upon any thing, but what relates to mines of iron, copper, gold, silver, pearls, purple, and silk; nor treat even these heads with any great extent. Pliny the naturalist will be my ordinary guide as to those of my subjects he has wrote upon. And I shall make great use of the learned remarks of the author of the natural history of gold and silver, extracted from the thirty-third book of Pliny, and printed at London.

SECT. I.

Mines of Iron.

It is certain, that the use of metals, especially of iron and copper, is almost as old as the world: but it does not appear that gold or silver were much regarded in the first ages. Solely intent upon the necessities of life, the first inhabitants of the earth did what new colonies are obliged to do. They applied themselves in building them houses, clearing lands, and furnishing themselves with the instruments necessary for cutting wood, hewing stone, and other mechanical uses. As all these tools could be formed only of iron, copper, or steel, those essential materials became, by a necessary consequence, the principal objects of their pursuit. Those who were settled in countries which produced them, were not long without knowing their importance. People came from all parts in quest of them; and their land, though in appearance poor and barren in every other respect, became an abundant and fertile soil to them. They wanted nothing, having that merchandise; and their iron bars were ingots, which procured them all the conveniences and elegancies of life.

It would be very grateful to know where, when, how, and by whom these materials were first discovered. Concealed as they are from our eyes, and hid in the bowels of the earth in small and almost imperceptible particles, which have no apparent relation, or visible disposition for the different works composed of them.

¹ Athen. l. v. p. 263.

² Cic. apud. Strab. l. xvii. p. 798.

was it that instructed man in the uses to be made of them? It would be doing chance too much honour to impute to it this discovery. The infinite importance, and almost indispensable necessity for the instruments, with which they supply us, well deserve, that we should acknowledge it to proceed from the concurrence and goodness of the divine providence. It is true, that providence commonly takes delight in concealing its most wonderful gifts under events, which have all the appearance of chance and accident. But attentive and religious eyes are not deceived in them, and easily discover, under these disguises, the beneficence and liberality of God, so much the more worthy of admiration and acknowledgment, as less visible to man. This is a truth confessed by the Pagans themselves, as I have already observed elsewhere. It is remarkable that iron, which of all metals is the most necessary, is also the most common, the easiest to be found, less deep in the earth than any other, and most abundant.¹

As I find little in Pliny upon the manner in which the ancients discovered and prepared metals, I am obliged to have recourse to what the moderns say upon that head, in order to give the reader, at least, some slight idea of the usual methods in the discovery, preparation, and melting of those metals, which were in part practised by the ancients. The matter from which iron is extracted, (which the term of art calls *iron-ore*) is found in mines of different depth, sometimes in stones as big as the fist, and sometimes only in sand.² After having amassed the quantity of matter to be melted, it is put into large furnaces, where a great fire has been kindled. When the ore is melted and well skimmed, they make it run out of the furnace through a hole prepared for that purpose, from which, running with rapidity like a torrent of fire, it falls into different moulds, according to the variety of works to be cast, as kettles, and such kind of utensils. In the same manner they form also the large lumps of iron, called *sows*, of different sizes, which weigh sometimes two or three thousand pounds, and upwards. These are afterwards carried to the *forge*, or foundry, to be forged or fined with the assistance of mills, which keep great hammers continually going.

Steel is a kind of iron refined and purified by fire, which renders it whiter, more solid, and of a smaller and finer grain. It is the hardest of all metals, when prepared and *tempered* as it ought. That *temper* is derived from cold water, and requires a nice attention in the workman, in

taking the steel out of the fire when it has attained a certain degree of heat.³ When we consider a sharp and well polished knife or razor, could we believe it was possible to form them out of a little earth, or some blackish stones? What a difference is there between so rude a matter, and such polished and shining instruments! Of what is not human industry capable?

Mr. Reaumur observes, in speaking of iron, one thing well worthy of observation.⁴ Though fire seldom or ever renders it so liquid as it does gold, brass, pewter, and lead; of all metals, however, there is not one that takes the mould so perfectly, insinuates itself so well into the most minute parts of it, and receives impressions with such exactitude.

SECT. II.

Mines of Copper or Brass.

Copper, which is otherwise called brass, is an hard, dry, weighty metal. It is taken out of mines like other metals, where it is found as well as iron, either in powder or stone. Before it is melted, it must be washed very much, in order to separate the earth from it, with which it is mixed. It is afterwards melted in the furnaces by great fires, and when melted, poured off into moulds. The copper, which has had only one melting, is the common and ordinary copper. To render it purer and finer, it is melted once or twice more.⁵ When it has passed the fire several times, and the grossest parts are separated from it, it is called *rosette*, or the purest and finest copper.

Copper is naturally red, of which brass is a species made yellow with *lapis calaminaris*. The *lapis calaminaris*, which is also called *cadmia*, is a mineral or fossil which founders use to change the colour of copper yellow.⁶ This stone does not become yellow, till after it has been baked in the manner of bricks; it is then used either to make yellow, or increase the red fine copper. The yellow copper or brass is therefore a mixture of the red with *lapis calaminaris*, which augments its weight from ten to fifty in the hundred, according to the different goodness of the copper. It is also called *latten*, and in the Roman language *aurichalcum*.

Bronze is a made metal, consisting of a mixture of several metals. For the fine statues of this metal, the mixture is half fine copper and

1 Ferri metalla ubique propem odum reperiuntur.—Metallorum omnium vena ferri largissima est.—Plin. lib. xxxiv. c. 14.

2 Plin. l. xxxiv. c. 14, 15.

3 Stridentia tingunt ara lacu.

4 Mémoires de l'Acad. des Scienc. an. 1726.

5 Præterea semel recoquant : quod sæpius fecisse, bonitati plurimum confert.—Plin. l. xxxiv. c. 8.

6 Vena (æris) quo dictum est modo effuditur ignique perficitur. Fit et à lapide aroso, quem vocant *cadmiam*. Plin. l. xxxiv. c. 1.

half brass. In the ordinary sort, the mixture is of pewter, and sometimes of lead, to save cost. There is also another species of mixed copper, called by the French *fonte*, which differs from the *bronze*, only by being more or less mixed.

The art of founding, or as it is vulgarly called, of casting in brass, is very ancient. All ages have made their vessels and other curious works in metal. Casting must have been very common in Egypt when the Israelites left it, as they could form in the desert, without any great preparations, a statue with lineaments and shape representing a calf. Soon after they made the molten sea, and all other vessels for the tabernacle, and afterwards for the temple. It was not uncommon to form statues of plates hammered into form and rivetted together. The invention of these images, either cast or hammered, took birth in the East, as well as idolatry, and afterwards communicated itself to Greece, which carried the art to the highest degree of perfection.

The most celebrated and valuable copper amongst the Greeks, was that of Corinth, of which I have spoken elsewhere, and that of Delos. Cicero joins them together in one of his orations, where he mentions a vessel of brass, called *authepsa*, in which meat was dressed with very little fire, and almost of itself: ⁷ this vessel was sold so dear, that those who passed by, and heard the sum bid for it at the sale, imagined the purchase of an estate was in question.

It is said that brass was used before iron for the making of arms. It certainly was in use for money before gold and silver, at least with the Romans. It consisted at first of pieces of different sizes, and was taken by weight, without having any fixed mark or figure upon it; from whence came the form of speaking used in sales, *per as et libram*. Servius Tullius, the sixth king of the Romans, was the first that reduced it to form, and stamped it with a particular impression: and as at that time the greatest riches consisted in cattle, oxen, sheep, hogs, &c. the figure of those animals, or of their heads, was stamped upon the first money that was coined, and it was called *pecunia*, from the word *pecus*, which signifies cattle in general. ⁸ It was not till the consulship of Q. Fabius and Ogulnius, five years before the first punic war, in the 485th year of Rome, that silver monies was used at Rome. ⁹ They, however, always retained the

ancient language and denomination, taken from the word *as*, brass. From thence the expression, *as grave* (heavy brass), to signify, at least in the origin of that term, the asses of a pound weight; *ararium*, the public treasury, wherein, in ancient times, there was only brass money; *as alienum*, borrowed money; with many others of like signification.

SECT. III.

Mines of Gold.

To find gold, says Pliny, we have three different methods. It is extracted either from rivers, the bowels of the earth, or the ruins of mountains, by undermining and throwing them down. ¹⁰

I. *Gold found in rivers.*

Gold is gathered in small grains, or little quantiles upon the shores of rivers, as in Spain upon the brink of the Tagus, in Italy upon the Po, in Thrace upon the Hebrus, in Asia upon the Pactolus, and lastly, upon the Ganges in India; and it is agreed, that the gold found in this manner is the best of all; because having long ran through rocks, and over sands, it has had time to cleanse and purify itself. ¹¹ The rivers I mention were not the only ones in which gold was to be found. Our Gaul had the same advantage. Diodorus says, that nature had given it gold in a peculiar manner, without obliging the natives to hunt after it with art and labour; that it was mingled with the sands of the rivers; that the Gauls knew how to wash those sands, extract the gold, and melt it down; and that they made themselves rings, bracelets, girdles, and other ornaments of it. ¹² Some rivers of France are said to have retained this privilege: the Rhine, the Rhone, the Garonne, the Doux in Franche-Comte, the Ceze, and the Gardon, which have their sources in the Cévennes, the Ariège in the country of Foix, and some others. ¹³ The gathering of it indeed does not turn to any considerable account, scarce sufficing to the maintenance of the country people, who employ themselves for some months in that work. They have sometimes their lucky days, when they get more than a pistole for their trouble; but they pay for them on others, which produce little or nothing.

II. *Gold found in the bowels of the earth.*

Those who search after gold, begin, by finding,

⁷ Domus reserta vasis Corinthiis et Deliacis: in quibus est authepsa illa, quam tanto pretio nuper mercatus est, ut qui pretereuntes pretium enumerari audiebant, fundum vanire arbitrantur.—*Orat. pro Rosc. Amerc.* n. 133.

⁸ Servius Rex, primus signavit *as*. Antea rudi usos Romæ Timeus tradit. Signatum est nota pecudum: unde pecunia appellata.—*Plin.* l. xxxiii. c. 3.

⁹ *Plin.* l. xxxiv. c. 1.

¹⁰ *Plin.* l. xxxiii. c. 4.

¹¹ Nec ullum absolutum aurum est, ut curso ipsa tri-
tueque perpolitum.—*Plin.*

¹² *Diod. l. v.*

¹³ *Memoirs of the Academy of Sciences, an. 1718.*

what we call in French, *la Manne*, manna, a kind of earth, which by its colour, and the exhalations that rise from it, informs those, who understand mines, that there is gold underneath it. As soon as the vein of gold appears, the water must be turned off, and the ore dug out industriously, which must be taken away, and washed in proper layers. The ore being put into them, a stream of water is poured on continually, in proportion to the quantity of the ore to be washed; and to assist the force of the water, an iron fork is used, with which the ore is stirred, and broke, till nothing remains in the laver but a sediment of black sand, with which the gold is mingled. This sediment is put into a large wooden dish, in the midst of which four or five deep lines are cut, and by washing it, and stirring it well in several waters, *conjectura*, the terrene parts dissolve, and nothing remains but pure gold dust. This is the method now used in Chili, and the same as was practised in the time of Pliny:¹ *Aurum qui querunt, ante omnia segulum tollunt: ita vocatur inâcium. Alveus hic est: arena lavantur, atque ex eo quod resedit, conjectura capitur.* Every thing is comprehended in these few words. *Segulum*: which is what the French call *la manne*, or manna. *Alveus hic est*: that is, the vein of gold ore. *Arena lavantur*: this implies the lavers. *Atque ex eo quod resedit*: this the sediment of black sand, in which the gold is contained. *Conjectura capitur*: here the stirring of the sediment, the running off of the water, and the gold dust that remains, are intimated.

It sometimes happens, that without digging far, the gold is found upon the superficies of the earth: but this good fortune is not frequent, though there have been examples of it. For not long ago, says Pliny, gold was found in this manner in Nero's reign, and in so great a quantity, that fifty pounds a day, at least, has been gathered of it.² This was in Dalmatia.

It is commonly necessary to dig a great way, and to form subterraneous caverns, in which marble and small flints are found, covered with the gold. These caverns are carried on to the right or left, according to the running of the vein; and the earth above it is supported with strong props at proper distances. When the metallic stone, commonly called the ore in which the gold forms itself, is brought out of the mine, it is broke, pounded, washed, and put into the furnace. The first melting is called only silver, for there is always some of it mingled with the gold. The scum, which rises in the furnace, is called *scoria* in Latin. This is the dross of the metal, which the fire throws up, and is not peculiar to gold, but common to all metallic bodies.

This dross is not thrown away, but pounded and calcined over again, to extract what remains of good metal in it. The crucible, in which this preparation is made, ought to be of a certain white earth, not unlike that used by the potters.³ There is scarce any other which can bear the fire, bellows, and excessive heat of this substance melted.

This metal is very precious, but costs infinite pains in getting it. Slaves and criminals condemned to death, were employed in working the mines. The thirst of gold has always extinguished all sense of humanity in the human heart. Diodorus Siculus observes, that these unhappy creatures, laden with chains, were allowed no rest either by night or day; that they were treated with excessive cruelty; and that to deprive them of all hopes of being able to escape by corrupting their guards, soldiers were chosen for that office, who spoke a language unknown to them, and with whom, in consequence, they could have no correspondence, nor form any conspiracy.⁴

III. Gold found in the mountains.

There is another method to find gold, which regards properly only high and mountainous places, such as are frequently met with in Spain.⁵ These are dry and barren mountains in every other respect, which are obliged to give up their gold, to make amends, in some measure, for their sterility in every thing else.⁶

The work begins at first by cutting great holes to the right and left. The interior of the mountain itself is afterwards attacked by the assistance of torches and lamps. For the day is soon lost, and the night continues as long as the operations, that is, for several months. Before any great progress is made, great flaws appear in the earth, which falls in, and often crushes the poor miners to death; so that, says Pliny, people are much less bold and venturous in searching after pearls at the bottom of the waves in the east, than in digging for gold in the bowels of the earth, which is become by our avarice more dangerous than the sea itself.⁷ It is therefore necessary in these mines, as well as in the first I spoke of, to form good arches at proper distances, to support the hollowed mountain. There are great rocks and veins of stone found also in these, which must be broke by fire and

³ It is called *Tasconium*.

⁴ Diod. l. liii.

⁵ Plin. l. xxxiii. c. 4.

⁶ *Cætera montes Hispaniarum aridi sterilesque, in quibus nihil aliud gignatur, huic bono fertiles esse coguntur.—Plin.*

⁷ *Ut jam minis temerarium videretur è profundo maris petere margaritas: tanto nocentiores fecimus terras.—Plin.*

¹ See Dict. of Commerce.—*Plin.* l. xxxiii. c. 4.

² Pliny, *Ibid.*

vinegar. But as the smoke and steam would soon suffocate the workmen, it is often more necessary, and especially when the work is a little advanced, to break those enormous masses with pick-axes and crows, and to cut away large pieces by degrees, which must be given from hand to hand, or from shoulder to shoulder, till thrown out of the mine. Day and night are passed in this manner. Only the hindmost workmen see daylight; all the rest work by lamps. If the rock is found to be too long, or too thick, they proceed on the side, and carry on the work in a curve line. When the work is finished, and the subterraneous passages carried their proper length, they cut away the props of the arches, that had been formed at due distances from each other. This is the usual signal of the ruin which is to follow, and which those who are placed to watch it, perceive first, by the sinking in of the mountain, which begins to shake; upon which they immediately, either by hallooing, or beating upon a brazen instrument, give notice to the workmen to take care of themselves, and then run away the first for their own safety. The mountain, sapped on all sides in this manner, falls upon itself, and breaks to pieces with a dreadful noise. The victorious workmen then enjoy the sight of nature overturned.⁹ The gold, however, is not yet found; and when they began to pierce the hill, they did not know whether there was any in it. Hope and avarice were sufficient motives for undertaking the labour, and confronting such dangers.

But this is only the prelude to new toils, still greater and more heavy than the first. For the waters of the higher neighbouring mountains must be carried through very long trenches, in order to their being poured with impetuosity upon the ruins thus formed, and to carry off the precious metal.¹⁰ For this purpose new canals must be made, sometimes higher or lower according to the ground, and hence the greatest part of the labour arises. For the level must be well placed, and the heights well taken in all the places over which the torrent is to pass to the lower mountain that has been thrown down; in order that the water may have sufficient force to tear away the gold wherever it passes, which obliges the workmen to make it fall from the greatest height they can. And as to the inequality of the ground in its course, they remedy that by artificial canals, which preserve the descent, and keep the water within their bounds. And if there are any large rocks which oppose its passage, they must be hewn down, made level, and have tracks cut in them for the wood work, which is to receive and continue the canal.

Having united the waters of the highest neighbouring mountains, from whence they are to fall, they make great reservoirs, of the breadth of two hundred, and the depth of ten, feet. They generally leave five openings of three or four feet square, to receive the water at several places. After which, when the reservoirs are full, they open the sluice, from whence falls so violent and impetuous a torrent, that it carries away all before it, and even stones of considerable magnitude.

There is another work in the plain at the foot of the mine. New trenches must be dug there, which form several beds for the falling of the torrent from height to height, till it discharges itself into the sea. But to prevent the gold from being carried off with the current, they lay, at proper distances, good dams of *ulex*, a sort of shrub much resembling our rosemary, but something thicker of leaves, and consequently fitter for catching this prey as in nets. Add to this, that good planks are necessary on each side of these trenches, to keep the water within them; and where there are any dangerous inequalities of ground, these new canals must be supported with shores,¹¹ till the torrent loses itself at last in the sand of the ocean, in the neighbourhood of which the mines commonly are. The gold got in this manner at the feet of mountains, has no need of being purified by fire; for it is at first what it ought to be. It is found in lumps of various sizes, as it is also in deep mines, but not so commonly. As to the wild rosemary branches used on this occasion, they are taken up with care, dried, and then burned; after this the ashes are washed on the turf, upon which the gold falls, and is easily gathered.

Pliny examines wherefore gold is preferred to other metals, and gives several reasons for it.¹² It is the only metal which loses nothing, or almost nothing by the fire, not even of funeral piles, or conflagrations, in which the flames are generally most violent. It is even affirmed to be rather the better for having past the fire several times. It is by fire also that proof is made of it; for when it is good, it takes its colour from it. This the workmen call *obryzum*, refined gold. What is wonderful in this proof, is, that the hottest charcoal has no effect in it: to melt it, a clear fire of straw is necessary, with a little lead thrown in to refine it.¹³

Gold loses very little by use, and much less

¹⁰ Machines to support those canals made of board.

¹¹ Plin. l. xxxiii. c. 53.

¹² Strabo makes the same remark, and gives the reason for this effect.—*Palaë facillius liquefit aurum: quia flamma mollis cum sit, proportionem habet temperaturam ad id quod credit et facile funditur; carbo autem multum absumit, nimis colliquans sua rehentia et elevans.* Strab. l. iii. p. 146.

⁹ Spectant victores ruinam nature: nec tamen adhuc aurum est.—*Plin.*

⁹ A centesimo plerumque lapide.

than any other metal: whereas silver, copper, and pewter, soil the hands, and draw black lines upon any thing, which is a proof that they waste, and lose their substance more easily. It is the only metal that contracts no rust, nor any thing which changes its beauty, or diminishes its weight. It is a thing well worthy of admiration, that of all substances gold preserves itself best, and entire, without rust or dirt, in water, the earth, dung, and sepulchres, and that throughout all ages. There are medals of it in being which have been struck above two thousand years, which seem just come from the workman's hands. It is observed, that gold resists the impressions and corrosion of salt and vinegar, which melt and subdue all other matter.¹

There is no metal which extends better, nor divides into so great a number of particles of different kinds.² An ounce of gold, for instance, will form seven hundred and fifty leaves, each leaf of four inches square and upwards. What Pliny says here is certainly very wonderful; but we shall presently see, that our modern artificers have carried their skill much farther than the ancients in this, as well as many other points. In fine, gold will admit to be spun and wove like wool into any form. It may be worked even without wool, or silk, or with both. The first of the Tarquins triumphed in a vest of cloth made of gold; and Agrippina, the mother of Nero, when the emperor Claudius her husband gave the people the representation of a sea fight, appeared at it in a long robe made entirely of gold wire, without any mixture whatsoever. What is related of the extreme smallness of gold and silver, when reduced into wire, would seem incredible, if not confirmed by daily experience. I shall only copy here what I find in the Memoirs of the Academy of Sciences upon this head.³

We know, say those Memoirs, that gold wire is only silver wire gilt. By the means of the engine for drawing wire, a cylinder of silver, covered with leaf gold, being extended, becomes wire, and continues gilt to the utmost length it can be drawn. It is generally of the weight of forty-five marks; its diameter is an inch and a quarter French, and its length almost two and twenty inches. Mr. Reaumur proves, that this cylinder of silver, of two and twenty inches, is extended by the engine to thirteen million, nine hundred and sixty-three thousand, two hundred and forty inches, or, one million, one hundred and sixty-three thousand, five hundred and

twenty feet; that is to say, six hundred and thirty-four thousand, six hundred and ninety-two times longer than it was, which is very near ninety-seven leagues in length, allowing two thousand perches to each league. This wire is spun over silk thread, and before spun is made flat from round as it was, when first drawn, and in flattening generally lengthens one seventh at least; so that its first length of twenty-two inches, is changed into that of an hundred and eleven leagues. But this wire may be lengthened a fourth in flattening, instead of a seventh, and in consequence be six-score leagues in extent. This should seem a prodigious extension, and yet is nothing.

The cylinder of silver of forty-five marks, and twenty-two inches length, requires only to be covered with one ounce of leaf-gold. It is true, the gilding will be light, but it will always be gilding; and though the cylinder in passing the engine attains the length of an hundred and twenty leagues, the gold will still continue to cover the silver without variation. We may see how exceedingly small the ounce of gold, which covers the cylinder of silver of forty-five marks, must become, in continuing to cover it throughout so vast an extent. Mr. Reaumur adds to this consideration, that it is easy to distinguish, that the silver is more gilt in some than in other places; and he finds, by a calculation of wire the most equally gilt, that the thickness of the gold is $\frac{1}{1030000}$ th. of a line, or twelfth part of an inch; so enormous a smallness, that it is as inconceivable to us, as the infinite points of the geometricians. It is, however, real, and produced by mechanical instruments, which, though ever so fine to our senses, must still be very gross in fact. Our understanding is lost and confounded in the consideration of such objects; and how much more in the infinitely small of God!

Electrum.

It is necessary to observe, says Pliny, whom I copy in all that follows, that in all kinds of gold there always is some silver, more or less: sometimes a tenth, sometimes a ninth or an eighth.⁴ There is but one mine in Gaul from whence gold is extracted, that contains only a thirtieth part of silver, which makes it far more valuable than all others. This gold is called *Albiceratense*, of *Albicerate* (an ancient place in Gaul near *Tarbæ*). There were several mines in Gaul, which have been since either neglected or exhausted. Strabo mentions some of them, amongst which are those of *Tarbæ*, that were, as he says, very fruitful in gold; for without

¹ Jam contra salis et aceti succos, domitores rerum, constantia.—*Plin.*

² Nec alius laxius dilatatur, aut numerosius dividitur, utpote cujus unclæ in septingenas et quinquagenas, pluresque bractæas, quaternum utroque digitorum, spargantur.—*Plin.*

³ An. 1718.

⁴ Lib. xxxiii. c. 3.

digging far, they found it in quantities large enough to fill the palm of the hand, which had no great occasion for being refined.⁵ They had also abundance of gold dust,⁶ and gold in grains of equal goodness with the other.

To the gold, continues Pliny, which was found to have a fifth part of silver in it, they gave the name of Electrum. (It might be called white gold, because it came near that colour, and is paler than the other.) The most ancient people seemed to have set a great value upon it. Homer, in his description of Menelaus' palace, says, it shone universally with gold, electrum, silver, and ivory.⁷ The electrum has this property peculiar to it, that it brightens much more by the light of lamps than either gold or silver.

SECT. IV.

Silver Mines.

Silver mines, in many respects, resemble those of gold.⁸ The earth is bored, and long caverns cut on the right or left, according to the course of the vein. The colour of the metal does not enliven the hopes of the workmen, nor the ore glitter and sparkle as in the others. The earth which contains the silver is sometimes reddish, and sometimes of an ash colour, which the workmen distinguish by use. As for the silver, it can be only refined by fire, with lead, or with pewter ore.⁹ This ore is called *galena*, and is found commonly in the veins of silver mines. The fire only separates these substances; the one of which it reduces into lead or pewter, and the other into silver; but the last always swims at top, because it is lightest, almost like oil upon water.

There were silver mines in almost all the provinces of the Roman empire. That metal was found in Italy near Vercellæ; in Sardinia, where there was abundance of it; in several parts of Gaul; even in Britain; in Alsace, witness Strasburgh, which took its name *Argentoratum*, as Colmar did *Argentaria*, from it; in Dalmatia and Pannonia, now called Hungary; and lastly, in Spain and Portugal, which produced the finest qualities.

What is most surprising in the mines of Spain, is that the works, begun in them by Hannibal's orders,¹⁰ subsist in our days, says Pliny;¹¹ that is to say, above three hundred years, and that they still retain the names of the

first discoverers of them, who were all Carthaginians. One of these mines, amongst the rest, exists now, and is called *Bebulo*. It is the same from which Hannibal daily extracted three hundred pounds of silver, and has been extended fifteen hundred paces in length, and even through the mountains, by the Aecitanian people;¹² who, without suspending their operations either by night or day, and directed in their operations solely by the light of their lamps, have drawn off all the water from them. There are also veins of silver, discovered in that country, almost upon the surface of the earth. For the rest, the ancients easily knew when they were come to the end of the vein, which was when they found alum; after that they searched no farther: though lately (it is still Pliny who speaks), beyond the alum, they have found a white vein of copper, which served the workmen as a new token, that they were at the end of the vein of silver.

The discovery of the metals we have hitherto spoken of, is a wonder we can never sufficiently admire. There was nothing more hidden in nature than gold and silver. They were buried deep in the earth, mingled with the hardest stones, and in appearance perfectly useless; the parts of these precious metals were so confounded with foreign bodies, so imperceptible from that mixture, and so difficult to separate, that it did not seem possible to cleanse, collect, refine, and apply them to their uses. Man, however, has surmounted this difficulty, and by experiments has brought his first discoveries to such perfection, that one would imagine gold and silver were formed from the first in solid pieces, and were as easily distinguished as the flints, which lie on the surface of the earth. But was man of himself capable of making such discoveries? Cicero says, in express terms, that God in vain had formed gold, silver, copper, and iron, in the bowels of the earth, if he had not vouchsafed to teach man the means by which he might come at the veins that conceal those precious metals.¹³

SECT. V.

Product of gold and silver mines, one of the principal sources of the riches of the ancients.

It is easy to conceive that mines of gold and silver must have produced great profits to the private persons and princes who possessed them, if they took the least trouble to work them.

Philip, the father of Alexander the Great,

⁵ Strab. l. iv. p. 190.

⁶ Bédier.

⁷ Odys. l. iv. v. 71.

⁸ Plin. l. xxxiii. c. 6.

⁹ This ore is the rude and mixed substance which contains the metal. It is commonly called the Marcassite stone, especially with relation to gold and silver.

¹⁰ When he went thither to besiege Saguntum.

¹¹ Plin. l. xxxiii. c. 6.

¹² The people of Murcia and Valentia, which were part of the district of new Carthage.

¹³ Aurum et argentum, as ferrum frustra natura divina genuisset, nisi eisdem docuisset quemadmodum ad eorum venas perveniretur. *De Divinal*, l. i. n. 116.

had gold mines near Pydna, a city of Macedonia, from which he drew yearly a thousand talents, that is to say, three millions.¹ He had also other mines of gold and silver in Thessaly and Thrace; and it appears, that these mines subsisted as long as the kingdom of Macedonia;² for the Romans, when they had conquered Perseus, prohibited the use and exercise of them to the Macedonians.³

The Athenians had silver mines not only at Laurium in Attica, but particularly in Thrace, from which they were great gainers. Xenophon mentions many citizens enriched by them.⁴ Hipponius had six hundred slaves: Nicias, who was killed in Sicily, had a thousand. The farmers of their mines paid daily to the first fifty livres, clear of all charges, allowing an obolus⁵ a day for each slave; and as much in proportion to the second; which amounted to a considerable revenue.

Xenophon, in the treatise, wherein he proposes several methods for augmenting the revenues of Athens, gives the Athenians excellent advice upon this head, and exhorts them, above all, to make commerce honourable; to encourage and protect those who applied themselves to it, whether citizens or strangers; to advance money for their use, taking security for the payment; to supply them with ships for the transportation of merchandise; and to be assured, that with regard to trade, the opulence and strength of the state consisted in the wealth of individuals, and of the people. He insists very much in relation to mines, and is earnest that the republic should work them in its own name, and for its own advantage, without being afraid of injuring private individuals by that conduct; because they sufficed for the enriching both the one and the other, and that mines were not wanting to workmen, but workmen to the mines.

But the produce of the mines of Attica and Thrace was nothing in comparison with that of the Spanish mines. The Tyrians had the first profits of them, the inhabitants of the country not knowing their value. The Carthaginians succeeded them; and as soon as they had set foot in Spain, perceived the mines would be an inexhaustible source of riches for them. Pliny informs us,⁶ that one of them alone supplied Hannibal daily with three hundred pounds of silver, which amounts to twelve thousand six hundred livres, as the same Pliny observes elsewhere.

Polybius, cited by Strabo, says, that in his times there were forty thousand men employed in the mines in the neighbourhood of Carthage, and that they paid daily twenty-five thousand drachmas to the Roman people, that is, twelve thousand five hundred livres.

History mentions private persons who had immense and incredible revenues. Varro speaks of one Ptolemy, a private person, who, in the time of Pompey, commanded in Syria, and maintained eight thousand horse at his own expenses; and had generally a thousand guests at his table, who had each a gold cup, which was changed at every course.⁷ This is nothing to Pythius of Bithynia, who made king Darius a present of the plantain and vine, so much extolled in history; both of massy gold, and feasted the whole army of Xerxes one day in a splendid manner, though it consisted of seventeen hundred thousand men; offering that prince five months' pay for that prodigious host, and the necessary provisions for the whole time.⁸ From what source could such enormous treasures arise, if not principally from the mines of gold and silver possessed by these individuals? We are surprised to read in Plutarch the account of the sums carried to Rome, for the triumphs of Paulus Emilius, Lucullus, and many other victorious generals. But all this is inconsiderable to the endless millions amassed by David and Solomon, and employed in the building and ornaments of the temple of Jerusalem. Those immense riches, of which the recital astonishes us, was partly the fruits of the commerce established by David in Arabia, Persia, and Indostan, by the means of two ports⁹ he had caused to be built in Idumea, at the extremity of the Red Sea; which trade Solomon must have considerably augmented, as in one voyage only, his fleet brought home four hundred and fifty talents of gold, which amount to above one hundred and thirty-five millions of livres.¹⁰ Judea was but a small country, and nevertheless the annual revenue of it, in the time of Solomon, without reckoning many other sums, amounted to six hundred and sixty-six talents of gold, which make near two hundred millions of livres.¹¹ Many mines must have been dug in those days, for supplying so incredible a quantity of gold, and those of Mexico and Peru were not then discovered.

SECT. VI.

Of Coins and Medals.

Though commerce begun by the exchange of

¹ Diod. l. xvi.

² Justin. l. viii. c. 3. Strab. l. vii. p. 331.

³ Metalli quoque Macedonici, quod ingens vectigal erat, locationes tolli placebat.—*Liv.* l. xlv. n. 18.

⁴ Xenoph. de Ration. Redit.

⁵ Six oboli made one drachma, which was worth tenpence French; a hundred drachmas a mina, and sixty minae, a talent.

⁶ Plin. l. xxxiii. c. 6.

⁷ Var. apud Plin. l. xxxiii. c. 10.

⁸ Plin. *Ibid.* Herod. l. vii. c. 27.

⁹ Elath and Asiongaber.

¹⁰ 2 Chron. viii. 18.

¹¹ 2 Chron. ix. 13.

commodities, as appears in Homer, experience soon made the inconvenience of that traffic evident, from the nature of the several merchandises, that could neither be divided, nor cut without considerable prejudice to their value; which obliged the dealers in them, by little and little, to have recourse to metals, which diminished neither in goodness nor fabric by division. Hence, from the time of Abraham, and without doubt before him, gold and silver were introduced in commerce, and perhaps copper also for the lesser wares. As frauds were committed in regard to the weight and quality of the metal, the civil government and public authority interposed, for establishing the security of commerce, and stamped metals with impressions to distinguish and authorise them. From thence came the various dies for money, the names of the coiners, the effigies of princes, the years of consulships, and the like marks.

The Greeks put enigmatical hieroglyphics upon their coins, which were peculiar to each province. The people of Delphos represented a dolphin upon theirs; this was a kind of speaking blazonry: the Athenians the bird of their Minerva, the owl, the symbol of vigilance, even during the night: the Bœtians a Bacchus, with a bunch of grapes and a large cup, to imply the plenty and deliciousness of their country: the Macedonians a shield, in allusion to the force and valour of their soldiery: the Rhodians, the head of Apollo, or the sun, to whom they had dedicated their famous Colossus. In fine, every magistrate took pleasure to express in his money the glory of his province, or the advantages of his city.

The making bad money has been practised in all ages and nations. In the first payment made by the Carthaginians of the sum, to which the Romans had condemned them at the end of the second punic war, the money brought by their ambassadors was not of good alloy, and it was discovered, upon melting it, that the fourth part was bad.¹² They were obliged to make good the deficiency by borrowing money at Rome. Antony the Triumvir, at the time of his greatest necessity, caused iron to be mixed with the money coined by his order.¹³ This bad coin was either made by a mixture of copper, or wanted more or less of its just weight. A pound of gold and silver ought to be, as Pliny observes, fourscore and sixteen, or an hundred drachmas in weight. Marius Gratidianus, brother of the famous Marius, when he was prætor, suppressed

several disorders at Rome, relating to the coin, by wise regulations. The people, always sensible of amendments of that kind, to express their gratitude, erected statues to him in all the quarters of that city. It was this Marius¹⁴ whom Sylla, to avenge the cruelties committed by his brother, ordered to have his hands cut off, his legs broke, and his eyes put out, by the ministration of Catiline.¹⁵

The inconveniencies of exchanges were happily remedied by the coining of gold and silver monies, that became the common price for all merchandise, of which the painful, and often useless carriage, was thereby saved. But the ancient commerce was still in want of another advantage, which has been since wisely contrived; I mean the method of remitting money from place to place, by bill directing the payment of it.

It is not easy to distinguish with certainty the difference between coins and medals, opinions differing very much upon that head. What seems most probable is, that a piece of metal ought to be called coin, when it has, on one side, the head of the reigning prince, or some divinity, and is always the same on the reverse. Because money being intended to be always current, the people ought to know it with ease, that they may not be ignorant of its value. Thus the head of Janus, with the beak of a galleon on the reverse, was the first money of Rome.¹⁶ Servius Tullius, instead of the head of a ship, stamped that of a sheep, or an ox on it, from whence came the word *pecunia*, because those animals were of the kind called *pecus*. For the head of Janus, a woman armed was afterwards substituted, with the inscription *Roma*; and on the other side, a chariot drawn by two or four horses, of which were the pieces of money called *Rigati*, and *Quadrigati*. Victories were also put on them, *Victoriati*. All these different species are allowed to be coins, as are those which have certain marks on them; as an X, that is to say *Denarius*; an L, *Libra*; an S, *Semis*. These different marks explain the weight and value of the piece.

Medals are pieces of metal, which generally express on the reverse some considerable event. The parts of a medal are its two sides, of which the one is called the face or head, and the other the reverse. On each side of it there is a field, which is the middle of the medal; the circumference or border, and the exergue, which is the part at the bottom of the piece, upon which the

¹² Carthaginensis eo anno argentum in stipendium impositum primum Romanæ adveherunt. Id quia probum non esse questores renuclaverant, ex percentibusque pars quarta decotta erat: pecuniâ Romanæ mutua sumpta intertrimentam supplerunt.—*Liv.* l. xxxii. n. 2.

¹³ Plin. l. xxxiii. c. 9.

¹⁴ M. Mario, cui vicitim populus status posuerat, cui thure et vino Romanus Populus supplicabat, L. Sylla perfringi crura, oculos erui, amputari manus jussit; et quasi totiens occideret, quotiens vulnerabat, paulatim et per singulos artus laceravit.—*Senec. de Ira.* l. iii. c. 18.

¹⁵ Flor. l. iii. c. 21.

¹⁶ Plin. l. xxxiii. c. 3.

figures represented by the medal are placed. Upon these two faces the type, and the inscription, or legend, are distinguished. The figures represented are the type; the inscription or legend is the writing we see on it, and principally that upon the border or circumference of the medal.

To have some idea of the science of medals, it is necessary to know their origin and use; their division into ancient and modern, into Greek and Roman; what is meant by the medals of the early or later empire; of the great or small bronze; what a series is in the language of antiquarians. But this is not the proper place for explaining all these things. The book of father Joubert the Jesuit, on the knowledge of medals, contains what is necessary to be known, when a profound knowledge of them is not required.

I content myself with informing young persons, who are desirous to study history in all its extent, that the knowledge of medals is absolutely necessary to that kind of learning. For history is not to be learned in books only, which do not always tell the whole, or the truth of things. Recourse must therefore be had to pieces which support it; and which neither malice nor ignorance can injure or vary; and such are the monuments which we call medals. A thousand things equally important and curious are to be learnt from them, which are not to be found elsewhere. The pious and learned Mr. Tillemont, author of the *Memoirs upon the History of the Emperors*, gives us a proof and model of the use which may be made of the knowledge of medals.

As much may be said of antique seals, and carved stones, which have this advantage of medals, that being of a harder substance, and representing the figures upon them in hollow, they preserve them perpetually in all their perfection; whereas medals are more subject to spoil, either by being rubbed, or by the corrosion of saline particles, to which they are always exposed. But to make amends, the latter, being all of them far more abundant than the former in their various species, they are of much greater use to the learned.

The royal academy of inscriptions and polite learning, established and renewed so successfully under the preceding reign, and which takes in all erudition ancient and modern for its object, will not a little contribute to preserve amongst us, not only a good taste for inscriptions and medals, which consists in a noble simplicity, but also a general taste for all works of art, that are principally founded upon ancient authors, whose writings this academy make their peculiar study. I dare not express here all that I think of a society, into which I am admitted, and of which I am a member. I was chosen into it upon its being revived, without making any interest for

so honourable a place, and indeed without knowing any thing of it; an introduction in my opinion, highly worthy of learned bodies. I could wish that I had merited it better, and had discharged the functions of a fellow of the academy with greater abilities.

SECT. VII.

Of Pearls.

The pearl is an hard, white, clear substance, formed in the inside of a certain kind of oysters. The testaceous fish, in which the pearls are found, is three or four times as large as the common oyster. It is commonly called *pearl*, or *mother of pearl*. Each mother of pearl generally produces ten or twelve pearls. An author, however, who has treated of their production, pretends to have seen to the number of an hundred and fifty in one of them; but in various degrees of perfection. The most perfect always appear the first, the rest remain under the oyster, at the bottom of the shell.

Pearl-fishing amongst the ancients was followed principally in the Indian seas, as it still is, as well as in those of America, and some parts of Europe. The divers, under whose arms a cord is tied, of which the end is made fast to the bark, go down into the sea several times successively, and after having torn the oysters from the rocks, and filled a basket with them, they come up again with great agility. This fishing is followed in a certain season of the year. The oysters are commonly put into the sand, where they corrupt by the extraordinary heat of the sun; and opening of themselves shew their pearls, which, after that, need only to be cleaned and dried. The other precious stones are quite rough, when taken from the rocks, where they grow, and derive their lustre only from the industry of man. Nature alone furnishes the substance which art must finish by cutting and polishing. But as to pearls, that clear and shining water, for which they are so much esteemed, comes into the world with them. They are found completely polished in the abysses of the sea, and nature puts the last hand to them before they are torn from their shells.

The perfection of pearls, according to Pliny, consists in their being of a glittering whiteness, large, round, smooth, and of a great weight, qualities seldom united in one subject. It is

1 In the terms of jewellers, they call the shining colour of pearls, *water*; from their being supposed to be made of water. Hence the pearl pendants of Cleopatra were said to be inestimable, both for their *water* and large size.

2 *Dos omnis in candore, magnitudine orbe, lavore, pondere; haud promptis rebus.* Plin. l. ix. c. 35.

chimerical to imagine, that pearls take birth from dew drops; that they are soft in the sea, and only harden when exposed to the air; that they waste and come to nothing, when it thunders, as Pliny and several authors after him say.³

Many things are highly prized only for being scarce, whose principal merit consists in the danger people are at to get them.⁴ It is strange that men should set so small a value upon their lives, and should judge them of less worth than shells hidden in the sea. If it were necessary, for the acquiring of wisdom, to undergo all the pains taken to find some pearl of uncommon beauty and magnitude, (and as much may be said of gold, silver, and precious stones), we ought not to hesitate a moment in resolving to venture life, and that often, for such inestimable treasure. Wisdom is the greatest of all fortunes; a pearl the most frivolous of riches: men, however, do nothing for the former, and hazard every thing for the latter.

SECT. VIII.

Purple.

Stuffs dyed with purple, were one of the most considerable branches of the commerce of the ancients, especially of Tyre, which by industry and extreme skill had carried that precious dye to the highest possible degree of perfection. The purple disputed value with gold itself in those remote times, and was the distinguishing mark of the greatest dignities of the universe, being principally appropriated to princes, kings, senators, consuls, dictators, emperors, and those to whom Rome granted the honour of a triumph.⁵

The purple is a colour, compounded between red and violet, taken from a sea-fish covered with a shell, called also *the purple*.⁶ Notwithstanding various treatises wrote by the moderns upon this colour so highly prized by the ancients, we are little acquainted with the nature of the liquor, which produced it. Aristotle and Pliny have left many remarkable things upon this point, but such as are more proper to excite, than fully to satisfy curiosity.⁷ The latter, who has spoken the most at large upon the preparation of purple, has confined all he says of it to some few lines.⁸ These might suffice for

the description of a known practice in those times; but is too little to give a proper idea of it to ours, after the use of it has ceased for many ages.

Pliny divides the several species of shells, from which the purple dye is taken, into two kinds;⁹ the first of which includes the small kind of *buccinum*, so called from the resemblance between that fish's shell, and a hunting horn; and the second the shells called purple, from the dye they contain. It is believed that this latter kind were called also *murex*. Some authors affirm, that the Tyrians discovered the dye we speak of by accident.¹⁰ An hungry dog, it is alleged, having broke one of these shells with his teeth upon the sea-side, and devoured one of these fish, all around his mouth and throat were dyed by it with so fine a colour, that it surprised every body that saw it, and gave birth to the desire of making use of it.¹¹ The purple of Getulia¹² in Africa, and that of Laconia¹³ in Europe, were in great estimation;¹⁴ but the Tyrian in Asia was preferred to all others; and that principally which was twice dyed, called for that reason *dibapha*. A pound of it was sold at Rome for a thousand denarii, that is five hundred livres. The *buccinum* and *murex* scarce differed in any thing but the bigness of shell, and the preparation of them. The *murex* was fished for generally in the open sea; whereas the *buccinum* was taken from the stones and rocks to which it adhered. I shall speak here only of the *buccinum*, and shall extract a small part of what I find upon it, in the learned dissertation of Monsieur Reaumur.¹⁵

The liquor could not be extracted from the *buccinum*, without employing a very considerable length of time for that purpose. It was first necessary to break the hard shell that covered them. This shell being broke at some distance from its opening, or the head of the *buccinum*, the broken pieces were taken away. A small vein then appeared, to use the expression of the ancients; or with greater propriety of speech, a small reservoir, full of the proper liquor for dying purple. The colour of the liquor contained in this small reservoir, made it very distinguishable, as it differed much from the flesh of the animal. Aristotle and Pliny say, it is white; and it is indeed inclining to white, or between white and yellow. The little reservoir,

3 Plin. l. ix. c. 35.

4 *Anima hominis quæsitâ maxime placet.* Plin. *ibid.*

5 Color nimio lepore vernans, obscuritas rubens, nigredo sanguinea regnantem discernit, dominum conspiciunt facit, et præstat humano generi ne de conspectu principis possit errari. Cassiod. l. i. *Var. Ep.* 2.

6 From thence purple habits are called in Latin, conchiliatæ vestes.

7 Arist. de Hist. Anim. l. v. c. 15. 8 Plin. l. ix. c. 38.

9 Plin. l. ix. c. 39. 10 Jul. Pollux. l. i. c. 4.

11 Cassiod. l. i. *Var. Ep.* 2.

12 Vestes Getulo murice tectas. Hor.

Robes with Getulian purple dy'd.

13 Nec Laconicas mihi

Trahunt honestæ purpuras clientæ. Hor.

Nor do my noble clients' wives with care

Laconia's purple spin for me to wear.

14 Plin. l. ix. c. 36—39.

15 *Mémoires de l'Acad. de Sciences*, an. 1711.

in which it is contained, is not of equal bigness in all the *buccina*; it is, however, commonly about a line, the twelfth part of an inch, in breadth, and two or three in length.—It was this little reservoir the ancients were obliged to take from the *buccinum*, in order to separate the liquor contained in it. They were under the necessity of cutting it from each fish, which was a tedious work, at least with regard to what it held: for there is not above a large drop of liquor in each reservoir, from whence it is not surprising that fine purple should be of so high a price amongst them. Aristotle and Pliny say indeed, that they did not take the pains to cut these little vessels from the smaller fish of this kind separately, but only pounded them in mortars, which was a means to shorten the work considerably. Vitruvius seems even to give this as the general preparation.¹ It is, however, not easy to conceive, how a fine purple colour could be attained by this means. The excrements of the animal must considerably change the purple colour, when heated together, after being put into the water. For that substance is itself of a brown, greenish colour, which, no doubt, it communicated to the water, and must very much have changed the purple colour; the quantity of it being exceedingly greater than that of the liquor.

In the preparation of purple, the cutting out the small reservoir of liquor from each *buccinum*, was not the whole trouble. All those small vessels were afterwards thrown into a great quantity of water, which was set over a slow fire for the space of ten hours. As this mixture was left so long upon the fire, it was impossible for it not to take the purple colour: it took it much sooner, as I am well convinced, says Mr. Reaumur, by a great number of experiments. But it was necessary to separate the fleshy parts, or little vessels, wherein the liquor was contained; which could not be done without losing much of the liquor, except by making those fleshy membranes dissolve in hot water, to the top of which they rose at length in scum, which was taken off with great care. This was one manner in which the ancients made the purple dye; that was not entirely lost, as is believed, or at least, was discovered again about fifty years ago by the royal society of England. One species of the shells from which it is extracted, a kind of *buccinum*, is common on the coast of that country. The observations of an Englishman upon this new discovery, were printed in the journals of France in 1686. Another *buccinum*, which gives also the purple dye, and is evidently one of those described by Pliny, is found upon the coast of Poitou. The greatest

shells of this kind are from twelve to thirteen lines (of an inch) in length, and from seven to eight in diameter, in the thickest part of them. They are a single shell turned spirally, like that of a garden snail, but somewhat longer.

In the Journal of the Learned for 1686, the various changes of colour through which the *buccinum's* liquor passes are described. If instead of taking out the vessel, which contains it, according to the method of the ancients, in making their purple, that vessel be only opened, and the liquor pressed out of it, the linen or other stuffs either of silk or wool, that imbibe this liquor, will appear only of a yellowish colour. But the same linen or stuffs, exposed to a moderate heat of the sun, such as it is in summer mornings, in a few hours take very different colours. That yellow begins at first to incline a little to the green; thence it becomes of a lemon colour. To that succeeds a livelier green, which changes into a deep green; this terminates in a violet colour, and afterwards fixes in a very fine purple. Thus these linens or stuffs, from their first yellow, proceed to a fine purple through all the various degrees of green. I pass over many very curious observations of Monsieur Reaumur upon these changes, which do not immediately come into my subject. It seems surprising, that Aristotle and Pliny, in speaking of the purple dye, and the shells or several countries from which it is extracted, should not say a word of the changes of colour, so worthy of remark, through which the dye passes before it attains the purple. Perhaps not having sufficiently examined these shells themselves, and being acquainted with them only from accounts little exact, they make no mention of changes which did not happen in the ordinary preparation of purple; for, in that, the liquor being mingled in caldrons with a great quantity of water, it turned immediately red.

Mr. Reaumur, in the voyage he made in the year 1710, upon the coast of Poitou, in considering the shells called *buccinum*, which the sea in its ebb had left upon the shore; he found a new species of purple dye, which he did not search after; and which, according to all appearances, had never been known to the ancients, though of the same species with their own. He observed that the *buccina* generally thronged about certain stones, and arched heaps of sand in such great quantities, that they might be taken up there by handfuls, though dispersed and single every where else. He perceived at the same time, that those stones or heaps of sand were covered with certain grains, of which the form resembled that of a small oblong bowl. The length of these grains was somewhat more than three lines, (a quarter of an inch) and their bigness something above one line. They seemed

1 Architect. l. vii. c. 13.

to him to contain a white liquor, inclining to yellow. He pressed out the juice of some of them upon his ruffle, which at first seemed only a little soiled with it; and he could perceive with difficulty, only a small yellowish speck here and there in the spot. The different objects which diverted his attention, made him forget what he had done, and he thought no farther of it, till casting his eyes by accident upon the same ruffle, about a quarter of an hour after, he was struck with an agreeable surprise, to see a fine purple colour on the places where the grains had been squeezed. This adventure occasioned many experiments, which give a wonderful pleasure in the relation, and show what great advantage it is to a nation to produce men of a peculiar genius, born with a taste and natural disposition for making happy discoveries in the works of nature.

Mr. Reaumur remarks, that the liquor was extracted from these grains, which he calls *the eggs of purple*, in an infinitely more commodious manner, than that practised by the ancients for the liquor of the *buccinum*. For there was nothing more to do, after having gathered these eggs, than to have them well washed in the seawater, to take off as much as possible the filth, which might change the purple colour by mixing with it; there was, I say, nothing more to do than to put them into clean cloths. The liquor was then pressed out, by twisting the ends of these cloths different ways, in the same manner almost that the juice is pressed out of gooseberries to make jelly. And to abridge this trouble still more, small presses might be used, which would immediately press out all the liquor. We have seen before, how much time and pains were necessary for extracting the liquor from the *buccina*.

The *coccus* or *coccum* supplied the ancients with the fine colour and dye we call scarlet, which, in some measure, disputed beauty and splendour with purple.³ Quintilian joins them together, where he complains that the parents of his times dressed their children, from their cradles, in scarlet and purple, and inspired them, in that early age, with a taste for luxury and magnificence.⁴ Scarlet, according to Pliny,⁵ supplied men with more splendid garments than purple, and at the same time more innocent, be-

cause it was not necessary to hazard life in attaining it.

Scarlet is generally believed the seed of a tree, of the holm-tree kind. It has been discovered to be a small round excrescence, red, and of the bigness of a pea, which grows upon the leaves of a little shrub of the holm species, called *ilex aculeata cocciglandifera*. This excrescence is caused by the bite of an insect, which lays its eggs in it. The Arabians term this grain *hermes*; the Latins, *coccus* and *vermiculus*; from whence the words *vermilion*, and *cusculum* or *quisquillum*, are derived. A great quantity of it is gathered in Provence and Languedoc. The water of the Gobelins's river is proper for dying scarlet.

There are two kinds of scarlet. The scarlet of France or of the Gobelins, which is made of the grain I have mentioned; and the scarlet of Holland, which derives itself from cochineal. This is a drug that comes from the East Indies. Authors do not agree upon the nature of cochineal. Some believe it a kind of worm, and others, that it is only the seed of a tree. The first kind is seldom used since the discovery of cochineal, which produces a much more beautiful and lively scarlet than that of the *hermes*, which is deeper, and comes nearer to the Roman purple. It has, however, one advantage of the cochineal-scarlet, which is, that it does not change colour when wet falls upon it, as the other does, which turns blackish immediately after.

SECT. IX.

Of Silken Stuffs.

Silk, as Monsieur Mahudal observes in the dissertation he has given us on this subject,⁶ of which I shall make great use in this place; silk, I say, is one of the things made use of for many ages almost throughout all Asia, in Africa, and many parts of Europe, without people's knowing what it was; whether it was that the people, amongst whom it grew, gave strangers little access to them; or that jealous of an advantage peculiar to themselves, they apprehended being deprived of it by foreigners, is uncertain. It was undoubtedly from the difficulty of being informed of the origin of this precious thread, that so many singular opinions arose among the most ancient authors respecting it.

To judge of it after the manner Herodotus has described it, viz. as a kind of wool much subtler and more beautiful than the ordinary kind, and which, he says, was the growth of a tree in the Indies, (the most remote country known by the eastern people of his times to the

² Plin. l. xxii. c. 2.

³ Quid non adultus concupiscet, qui in purpuris repit? Nondum prima verba exprimit, et jam coccum intelligit, jam conchylium possit.—Quintil. l. i. c. 1.

⁴ Transalpina Gallia herbis Tyrium atque conchylium tingit, omnesque alios colores. Nec quaerit in profunda murices—ut inveniat per quod matrona adultero placeat, corruptor insidietur nuptae. Stans et in sicco carpit, quo fruges modo.—Plin.

⁵ Memoirs of the Academy of Inscriptions, vol. v.

eastward) seems the first idea they had of silk.¹ It was not extraordinary, that the people sent into that country to make discoveries, seeing only the bags of the silk worms hanging from the trees in a climate where those insects breed, feed upon the leaves, and naturally ascend the branches, should take those bags for lumps of wool.

It is likely that Theophrastus, upon the relation of those mistaken persons, might conceive these a real species of trees, and rank them in a particular class, which he enumerates, of trees bearing wool. There is good reason to believe Virgil of the same opinion:—

Velleraque ut foliis depectant tenuia Seres.

Georg. l. ii. v. 121.

As India's sons

Comb the soft slender fleeces of the bough.

Aristotle, though the most ancient of the naturalists, has given a description of an insect that comes nearest the silk worm.² It is where he speaks of the different species of the caterpillar, that he describes one which comes from an horned worm, to which he does not give the name of *βόρβορος*, till it has shut itself up in a cod or bag, from whence, he says, it comes out a butterfly; it passes through these several changes, according to him, in six months. About four hundred years after Aristotle, Pliny, to whom that philosopher's history of animals was perfectly known, has repeated the same fact literally in his own.³ He places also, under the name *bombyx*, not only this species of worm, which, as some report, produced the silk of Cos; but several other caterpillars found in the same island, and which he supposes to form there the cods or bags, from which, he says, the women of the country spin silk, and make stuffs of great fineness and beauty. Pausanias, who wrote some years after Pliny, informs us, that this worm was of Indian extraction, and that the Greeks called it *Σέρεις*, from whence it derived the name of *Seres*, the inhabitants of the Indies, amongst whom, we are since convinced, this insect was first found.⁴

The worm, which produces silk, is an insect still less wonderful for the precious matter it supplies for the making of different stuffs, than for the various forms it takes, either before or after its having wrapt itself up in the rich bag, or cod, it spins for itself. From the grain or egg it is at first, it becomes a worm of considerable size, and of a white colour, inclining to yellow. When it is grown large, it encloses itself within

its bag, where it takes the form of a kind of gray bean, in which there seems neither life nor motion. It comes to life again to take the form of a butterfly, after having made itself an opening through its tomb of silk. At last, dying in reality, it prepares itself, by the egg or seed it leaves, a new life, which the fine weather and the heat of the summer are to assist it to resume. In the first volume of the *Spectacle de la Nature*, may be seen a more extensive, and more exact description of these various changes.

It is from this bag or cod, into which the worm shuts itself, that the different kinds of silken manufactures are made, which serve not only for the luxury and magnificence of the rich, but the subsistence of the poor, who spin, wind, and work them. Each bag or cod is found to contain more than nine hundred feet of thread; and this thread is double, and glued together throughout its whole length, which in consequence amounts to almost two thousand feet. How wonderful it is, that out of a substance so slight and fine, as almost to escape the eye, stuffs should be composed of such strength and duration, as those made of silk! But what lustre, beauty, and delicacy, are there in those stuffs! It is not surprising, that the commerce of the ancients consisted considerably in them, and that, as they were very scarce in those times, their price ran exceeding high. Vopiscus assures us, that the emperor Aurelian, for that reason, refused the empress his wife an habit of silk, which she earnestly solicited him to give her; and that he said to her, "the gods forbid that I should purchase silk at the price of its weight in gold;"⁵ for the price of a pound of silk was at that time a pound of gold.

It was not till very late, that the use of silk was known and became common in Europe. The historian Procopius dates the era of it about the middle of the fifth century, under the emperor Justinian.⁶ He gives the honour of this discovery to two monks, who, soon after their arrival at Constantinople from the Indies, heard, in conversation, that Justinian was exceedingly solicitous about depriving the Persians of their silk trade with the Romans. They found means to be presented to him, and proposed a shorter way to deprive the Persians of that trade, than that of a commerce with the Ethiopians, which he had thoughts of setting on foot; and this was by teaching the Romans the art of making silks for themselves. The emperor, convinced

⁵ Vestem holosericam neque ipse in vestuario suo habuit, neque alteri utendum dedit. Ex cum ab eo uxor sua peteret, ut unico pallio blattco Serico uteretur, ille respondit: *Abstine ut auro sua pensetur. Libra enim aurum tunc libra Serice fuit.*—Vopisc. in Aurel.

⁶ Procop. de Bell. Vandal. l. ii.

¹ Herod. l. iii. c. 106.

² Arist. l. v. Hist. Anim. c. 19.

³ Plin. l. xi. c. 92, 93.

⁴ Pausan. l. vi. p. 394.

by the account they gave him of the possibility of the means, sent them back to Serinda (the city where they had resided) to get the eggs of the insects, which they told him could not be brought alive. Those monks, after their second voyage, returning to Constantinople, hatched the eggs they had brought from Serinda, in warm dung. When the worms came out of them, they fed them with white mulberry leaves, and demonstrated by the success of that experiment all the mechanism of silk, in which the emperor had desired to be informed. From that time the use of silk spread by degrees into several parts of Europe. Manufactures of it were set up at Athens, Thebes, and Corinth. It was not till about 1130, that Roger, king of Sicily, established one at Palermo. It was at that time, and in this island and Calabria, that workmen in silk were first seen, who were part of the booty that prince brought from the cities of Greece I have mentioned, which he conquered in his expedition to the Holy Land. In fine, the rest of Italy and Spain having learned of the Sicilians and Calabrians to breed the worms, and to spin and work their silk, the stuffs made of it began to be manufactured in France, especially in the south parts of that kingdom, where mulberry trees were raised with most ease. Louis XI., in 1470, established silk manufactures at Tours. The first workmen employed in them were brought from Genoa, Venice, Florence, and even from Greece. Works of silk were, however, so scarce even at court, that Henry II. was the first prince that wore silk stockings, which he did at the nuptials of his sister.

These insects are now become very common, but do not cease to be one of the most astonishing wonders of nature. Have the most skilful artificers been able hitherto to imitate the curious work of the silk worm? Have they found the secret to form so fine, so strong, so even, so shining, and so extended a thread? Have they a more valuable substance for the fabric of the richest stuffs? Do they know in what manner this worm converts the juice of a leaf into threads of gold? Can they give a reason why a matter, liquid before the air comes to it, should condense and extend to infinitude afterwards? Can we explain how this worm comes to have sense to form itself a retreat for the winter, within the innumerable folds of the silk, of which itself is the principal; and to expect, in that rich tomb, a kind of resurrection, which supplies it with the wings its first birth had not given it? These are the reflections made by the author of the new commentary upon Job, upon account of these words: *Quis posuit in ventribus sapientiam?* "Who hath given wisdom to certain animals, that have the industry to spin?"

CONCLUSION.

From what has been said hitherto, we may conclude commerce one of the parts of government, capable of contributing the most to the riches and plenty of a state; and therefore that it merits the particular attention of princes and their ministers. It does not appear, indeed, that the Romans set any value upon it. Dazzled with the glory of arms, they would have believed it a disgrace to them, to have applied their cares to the interest of trade, and in some measure to have become merchants; they, who believed themselves intended by fate to govern mankind, and were solely intent upon the conquest of the universe. Neither does it seem possible, that the spirit of conquest, and the spirit of commerce, should not mutually exclude each other in the same nation. The one necessarily introduces tumult, disorder, and desolation, and carries trouble and confusion along with it into all places: the other, on the contrary, breathes nothing but peace and tranquillity. I shall not examine in this place, whether the aversion of the Romans for commerce were founded in reason; or if a people, solely devoted to war, are thereby the happier. I only say, that a king who truly loves his subjects, and endeavours to plant abundance in his dominions, will spare no pains to make traffic flourish and succeed in them without difficulty. It has been often said, and it is a maxim generally received, that commerce demands only liberty and protection: liberty within wise restrictions, in not tying down such as exercise it to the observance of inconvenient, burdensome, and frequently useless regulations; protection, in granting them all the supports they have occasion for. We have seen the vast expenses Ptolemy Philadelphus was at, in making commerce flourish in Egypt; and how much glory the success of his measures acquired him. An intelligent and well inclined prince, will intermeddle only in commerce, to banish fraud and bad arts from it by severity, and will leave all the profits to his subjects, who have the trouble of it; well convinced, that he shall find sufficient advantages from it, by the great riches it will bring into his dominions.

I am sensible that commerce has its inconveniences and dangers. Gold, silver, diamonds, pearls, rich stuffs, in which it consists in a great measure, contribute to support an infinity of pernicious arts which tend only to enervate and corrupt a people's manners. It were to be desired, that the commerce might be removed from a Christian nation, which regards only such

according to the Hebrew, of the 36th verse of the 38th chapter of Job; which in the English version is only "Who hath put wisdom in the inward parts."

† This, Mr. Rollin says in the margin, is the sense, ac-

things as promote luxury, vanity, effeminacy, and idle expenses. But this is impossible. As long as bad desires shall have dominion over mankind, all things, even the best, will be abused by them. The abuse merits condemnation, but

is no reason for abolishing uses, which are not bad in their own nature. This maxim will have its weight, with regard to all the sciences I shall treat of in the sequel of this work.

SUPPLEMENT BY THE EDITOR.

THE origin, progress, and various fates of commerce, at different epochs and in different climes, from the earliest period to the present day, form a most extensive and interesting subject in the history of man. The changes which it has produced in the character and condition of the various nations who have successively pursued it, and the benefits which it has conferred on so many portions of the human race, present a wide and ample theme for the philosopher, the statesman, and the historian. It is our intention therefore to give an outline of the history of commerce and navigation (for they are both so intimately connected that they cannot well be treated of separately,) from the earliest period down to the time of Ptolemy. It is the more necessary to attempt something of this kind, as Rollin, although he dilates at considerable length on the articles of ancient commerce, does not give us any thing like a comprehensive sketch of its origin and progress.

From the book of Genesis it is evident, that commerce was understood and practised in the days of Abraham, and it would appear from the book of Job, that both internal and maritime commerce were known at a very early period in Arabia and the neighbouring countries, and that the former, as at the present day, was conducted by caravans. In chap. vi. 19. Job, whom the best authorities allow to have been contemporary with Jacob, mentions the companies (caravans) of Sheba and the troops of Tema, which, like those of the Ishmaelites, carried on commerce with Egypt and Canaan. In that chapter he compares his friends to those deceitful brooks which overflow their banks on a sudden in the rainy season, but which in the dry and sultry season, when they are most needed, fall suddenly, and afford no water, and thus disappoint the weary and thirsty travellers, who, journeying through the parched desert, and turning thither for refreshment, go away confounded and ashamed. "The troops of Tema looked, the companies of Sheba waited for them: they were confounded because they had hoped; they came thither, and were ashamed." These deceitful brooks lay just in the line of road which the modern caravans take in going from Mecca to Damascus, or Cairo. In chap. ix. 26. vessels, which imply commerce, are mentioned. "My days," says the patient and suffering patriarch, "are passed away as the swift ships," or "ships of desire," as in the margin of our Bibles. This, though a very beautiful poetical image, is not the exact meaning of the

original, according to the very learned Albert Schultens, who, in his commentary on Job, translates the phrase, "Ships of canes, or of the papyrus;" that is, light vessels constructed of rushes, such as were used in sailing up and down the Nile, and other great rivers and arms of the sea. These were perhaps the earliest ships of antiquity—the first rude attempts of the human race at navigation. Another instance of the early existence of maritime commerce is given in chap. xxviii. 4. where Job gives an account of the daring spirit and ingenuity of men, how they cross the broad rivers and arms of the sea for the purpose of commerce, where there is no path for the foot of man, where they lessen to the sight, and are tossed upon the waves. The literal rendering of the 4th verse, according to the learned Mr. Peters, in his Critical Dissertation on this very ancient book, is the following:—"The flood interrupts from the people (the stranger people) forgotten of the foot, they appear less than men, they are tossed." The word *Nahal*, here rendered flood, means a narrow arm of the sea, which, dividing nations from each other, interrupts their commerce, and which cannot be surmounted but by the aid of navigation, and the spirit of the intrepid mariner who boldly ventures to cross it. This is eminently descriptive of the strait of Bab-al-Mandab, which is but a few leagues across, and separates Abyssinia from Arabia Felix, the very country in which lay the Ophir mentioned in the chapter.

We have also the articles of commerce expressly described in the same chapter of the same book, as silver, gold, iron, brass, (copper), sapphires, onyxes, topazes, rubies, pearls, coral, and crystal. These particulars imply a knowledge of the art of mining, and the practice of navigation. The mineral and metallic substances are described as lying "concealed in the dark caverns of the earth, where light and darkness meet, where the lion's foot hath not trod, nor the piercing eye of the vulture hath reached," as being extracted thence by persevering labour and skill, ardent in the pursuit of wealth. There is no difficulty in this description respecting the particular minerals and metals, and the precious stone called the sapphire. But the exact signification of the Hebrew words rendered coral, crystal, onyx, ruby, topaz, and pearl, is still much contested amongst the learned. The plural word *peninim*, there rendered pearls, refers, according to Bruce, to that species called the red pearl, the *pinna* of the Greeks, and

mentioned by Strabo, *Ælian*, Theophrastus, and Pliny. Bruce also says that our translators have erred in translating *penim* by rubies in the end of the 18th verse, as that word always signifies pearls. Though Pliny makes the excellence of pearls to consist in their whiteness, yet it is well known that those of a yellow hue are most esteemed in India at this very day, as the *penim*, or red pearls, were in the days of Solomon. There are three species of shell-fish which contain as many kinds of pearls, and which are fished for in the Red Sea. The first is a muscle of the rarest kind, which contains pearls of great lustre and beauty, but seldom of a clear or white water. The second contains the red pearl of Job and Solomon, and the third the white pearl, most esteemed by Pliny, above mentioned. It is clear from the 28th chapter of Job, that a pearl fishery had been in his time established in the Red Sea, as also a coral fishery.

The Ophir of Job is clearly in Arabia Felix; but in what particular district of that extensive region it is impossible to determine. It is, however, supposed to be one of the mountains of Yemen, the particular tract of Arabia Felix possessed by the sons of Joktan, where mines of gold were formerly wrought, and is different from the Ophir of Solomon, as we shall have occasion to show in a little. Though Niebuhr denies that Arabia Felix contains mines of gold and silver, yet the positive and unanimous testimony of the ancients corroborates the statements of the book of Job, and will not permit us to doubt the wealth of ancient Arabia. The onyx of Job is still found in Yemen. According to Agatharchides and Strabo, the gold of Arabia Felix (Yemen) was found in such plenty as to exceed belief. The Alliee and Cassanite, in the south of Yemen, had such abundance of gold amongst them, that they would give double the weight of that metal for iron; triple its weight for brass; and ten times its weight for silver. In digging the earth, they found some pieces of virgin gold as large as olive stones, others still larger, and lastly, others as large as walnuts. Hence it came to pass that all the furniture of their houses, their beds, chairs, cups, and vessels of all kinds, consisted of gold and silver. Hence the phrase jewels of gold, in the 28th chapter of Job, is rendered in the marginal reading of our Bibles, "vessels of gold." Contiguous to these tribes, were the Dedebe or Debe, through whose country passed a stream, so abounding with small pieces of gold, that the mud at its mouth seemed to consist wholly of that metal. Diodorus relates that this gold was of so bright and glorious a colour, that it added an exceeding lustre and beauty to the most valuable gems set in it. "In short," says he, "Arabia Felix (Yemen) was so immensely rich, that all the treasures of the world seemed to centre here, all the commodities of Europe and Asia being brought thither, as to an universal mart." It is no objection to the truth of the narrative of the book of Job, and the accounts of the ancients before-mentioned, respecting the mineral wealth of Arabia in ancient times, that gold is not now found in Yemen, because the gold mines of that country were in all probability the first that were wrought in the world by the labour and ingenuity of man, and have been long since completely exhausted, even probably long before the time of Strabo.

The topaz of Ethiopia seems to be that mentioned by Pliny, which was found in that island

of the Red Sea called Chitis or Chutis, where, according to him, the best topazes were obtained. It must be observed, that the Ethiopia of Job was not the African country so called, but Arabia, and the real name is expressed on the margin of our Bibles by the word *Cush*; which word should have been retained in the textual reading, as most readers are apt to associate Ethiopia with the country so called above Egypt. It may be also observed, that the Chutis of Pliny is just a corruption of the word *Cush*, which in Chaldaic is called *Cuth* or *Cutha*, by changing the Hebrew *Schin* into *Thau*. The Hebrews and all the orientals denominated the people who inhabited the Arabian and African sides of the Red Sea, *Cushim* or *Cuthim*, *Cushites* or *Cuthites*, which proves that in very early times the descendants of *Cush* the son of *Ham* were the ruling people in Arabia. In fact, the inhabitants of that extensive peninsula were a mixed race of *Cushites*, *Joktanites*, *Ishmaelites*, the descendants of *Keturah*, and the progeny of *Lot* and *Esau*.

Next in antiquity to the era of Job, and the earliest in the records of profane history, is the era of the Phenicians. Whether these noted navigators and mercantile adventurers were the descendants of *Cush* or *Canaan* it is impossible to determine. The general opinion is in favour of the latter supposition. I rather incline to the former, and think that they were a band of adventurers from the Persian Gulf and the Erythrean Sea, who came and settled on the maritime coast of Syria, which from them obtained, at a very early period, the name of Phenicia, and who mingled themselves with the aboriginal natives, the descendants of *Canaan*, and thus became confounded with the *Canaanites* of *Sidon*. It is surely reasonable to think, that as the plain of *Shinar* was the first place where the human race congregated and dwelt, the Persian Gulf would be the scene of the first rude attempts at navigation. The Phenicians, whom Herodotus says came originally from the Erythrean sea, I believe to have been *Cushites*, who, having successively explored the Persian Gulf, the Erythrean and the Red Seas, and even crossed over into Africa by the narrow strait of *Bab-al-Mandab*, as already mentioned in our remarks on the book of Job, finally crossed the tract between the Gulf of *Aila* and the Mediterranean, and there finding a new channel for commercial enterprise and foreign adventure, settled in the vicinity of *Sidon*. But though it can never be satisfactorily ascertained whether the Phenicians were *Cushites* or *Canaanites*, this much may be safely affirmed, that they were *Hamites*. If the common opinion that the Phenicians were *Canaanites* dispossessed of their country by *Joshua*, and consequently forced to betake themselves to commerce for subsistence, as they were cooped up in the narrow stripe intervening between mount *Lebanon* and the sea, be admitted, it would fix the origin of Phenician commerce at too late a period; for, express mention is made of their commerce by the prophetic *Jacob*, when blessing his twelve sons. "Zebulun shall be an haven for ships, he shall dwell at the haven of the sea, and his border shall be unto *Zidon*." Moses himself tells us that *Tarshish*, (wherever it was situated,) was visited by the Phenicians. Now if the Phenicians were noted as a commercial people by *Jacob* and

Moses, before the exodus from Egypt, it necessarily follows, that the hypothesis of Sir Isaac Newton and his followers, in that system of chronology which they adopted, must be entirely erroneous, as it makes the Phenicians to be Edomites, expelled their country by David. On the above hypothesis, the era of maritime commerce did not commence till about the time of the foundation of the Jewish temple, or little more than 900 years before Christ, for so low is the date of its erection fixed by Newton.

At what period the first distant voyage of the Phenicians on the wide expanse of the Mediterranean Sea took place cannot be ascertained. The order of time in which their voyages were made, as well as their object and results, are very imperfectly known, they being performed long before the era of prosaic narrative or history. It is certain, however, that in very early times they either traded to, or formed colonial and mercantile establishments in Cyprus and Rhodes, and subsequently in Gaul, Sardinia, Sicily, and Greece, together with the southern part of Spain. Nearly 13 centuries before Christ, the Phenicians ventured beyond the Straits of Gibraltar or Pillars of Hercules, as they were anciently denominated, entered the Atlantic, and founded Cadiz. They also founded colonies about the same time on the western coast of Africa. Homer, who abounds in incidental notices of manners, customs, and commerce, expressly says, that at the period of the Trojan war the Phenicians furnished other nations with many articles contributing to luxury and magnificence. Most of the fine manufactured articles mentioned by Homer were of the Sidonian workmanship. The finest garment in the wardrobe of the Trojan queen was brought from Sidon by the voluptuous Paris. The most admired utensil in the palace of Menelaus, was a silver bowl edged with gold, which he had received as a present from the king of Sidon on his return from the war of Troy, and which he gave as a present to the young Telemachus, son of Ulysses. Seldom are toys or jewels mentioned by Homer, but with this additional circumstance, that they were either of Sidonian manufacture, or imported in a Phenician ship. This exactly harmonizes with what is recorded in sacred writ respecting the superior skill of the Phenicians in commerce and manufactures. The great Solomon, when about to build the temple, received "a cunning man from Tyre, skilful to work in gold and in silver; in brass, in iron, in stone, and in timber; in purple, in blue, in fine linen, and in crimson; also, to grave every manner of graving, and to find out every device which should be put to him."¹ This Phenician was, in fact, the grand architect in the building of the temple and the other magnificent edifices projected by Solomon. Solomon, in his letter to the Tyrian monarch, requesting assistance in his vast undertaking, expressly acknowledges the superiority of the Phenicians to his own subjects in such works as required ingenuity and taste. "For thou knowest that there is not among us any that can skill to hew timber like unto the Sidonians."² When Homer speaks of the Phenicians generally, he calls them "*the Phenicians famed for shipping, or renowned at sea.*" He denominates their ancient city, "Sidon, abounding with metals;" and the Sidonians, "ingenious, artful men." As the inordin-

ate love of gain is the general feature of a people wholly devoted to commerce, Homer calls the Phenicians "money scrapers," and "*men with a thousand small wiles.*"

The advantages which the Phenicians derived from their early Spanish commerce was immense, Spain being then the Peru of the old world. The inhabitants of that country, like the Indians of South America, had the precious metals in abundance, but were ignorant of the art of mining, and of the use and value of gold and silver. The Phenicians knew full well how to avail themselves of this ignorance. In return for oil and some other articles of home produce, they obtained from these simple people such prodigious quantities of silver, that their ships could not transport the treasure. They were obliged to take out all the lead with which their anchors were loaded, to put there the spare silver, as we are told by Aristotle and Diodorus Siculus. It must be supposed, of course, that in these very early times the precious metals were easily obtained in the beds of rivers and torrents, or very near the surface of the ground, as was the case in several parts of America, on the first arrival of the Spaniards. Besides gold and silver, the Phenicians obtained iron, lead, copper, tin, honey, wax, pitch, and perhaps quicksilver. As Spain is the only country in Europe, except Idria, in the Austrian dominions, where quicksilver, so necessary in the separation of the precious metals from the other mineral substances with which they are found combined, is to be procured, it is possible that it may have become known to these sagacious merchants. The Island of Cadiz was the grand emporium or storehouse of the Phenician merchants, where all the rich effects of the then eastern and western world were treasured up.

But the greatest proof of the antiquity and extent of the Phenician commerce is derived from scripture, which informs us that Solomon made a navy of ships in Ezion Geber, which is beside Eloth, in the land of Edom, on the shore of the Red Sea—that Hiram (the Tyrian monarch) sent to this navy his servants, shipmen that had knowledge of the sea, with the servants of Solomon; and they came to Ophir, and fetched thence gold, four hundred and twenty talents, and brought it to king Solomon—that the navy also of Hiram, that brought gold from Ophir, brought from the same place great plenty of alburn trees and precious stones.³ Not only are the same facts recorded in the book of Chronicles, but also the additional fact, that the ships of Solomon went to Tarshish, with the servants of Hiram: "Every three years came the ships of Tarshish, bringing gold and silver, ivory, and apes, and peacocks."⁴

Much difficulty has occurred in fixing the site of Ophir, some placing it in Arabia, some in the East Indies, and some on the eastern coast of Africa; and the question, Where was Ophir, is not yet clearly answered, and probably never will. It seems evident, however, that the Ophir frequented by the ships of Solomon and Hiram, and conjoined in the account with Tarshish, is not the same region with the Ophir of the book of Job, which was so called from Ophir, the son of Joktan, and brother of Havilah, who must not be confounded with another personage of the same

¹ 2 Chron. ii. 14.

² 1 Kings v. 6.

³ 1 Kings ix. 26—28.

⁴ 2 Chron. ix. 21.

name, the son of Cush, who gave his name to the tract so called, which was encompassed by one of the rivers of Paradise, and which lay at a great distance from Arabia Felix, the abode of the sons of Joktan. The word *Ophir*, according to the learned Bochart, signifies *rich, wealthy*, and is deduced by him from the Arabic verb *vaphura*, "to abound in wealth;" hence the Arabic *Asphar*, *Asphir*, whence, in all probability, the term *Africa* is derived. In the days of Job, navigation was only in its infancy; and the Ophir frequented by the fleets of Solomon and Hiram lay at a much greater distance from the head of the Red Sea than the Ophir mentioned by him. Mr. Bruce has laboured to prove, with much ingenuity and erudition, that the Ophir of Solomon was the modern Sofala, on the eastern coast of Africa, near Zanguebar. His hypothesis is by no means new, having been started a century before he was born; but he has taken great pains to show, what had not been previously done, that the voyage was performed entirely by means of the monsoons, and therefore could not but occupy the term of three years, mentioned in scripture. If it could be proved that in the days of Solomon such a voyage as that to Sofala could not be made but by the monsoons, and that the vessels employed were so constructed as to be able to sail only before the wind, it would go far to determine the point in favour of Sofala being the Ophir of Solomon and Hiram. But it is impossible to prove this, from the want of facts respecting the state of navigation in these days. That there was anciently abundance of gold at Sofala is a known fact, from such notices as have been obtained from the Portuguese navigators.

As Tarshish is joined with Ophir, Mr. Bruce fixes its site in the vicinity of Melinda, on the same coast, and quotes the Abyssinian annals to prove it, where it is recorded that Amda Sion, making war on that coast, reduced the Moorish chief of Tarshish. This fact, if true, is a strong additional proof that the modern Sofala corresponds to the ancient Ophir, as no eastern Tarshish had been hitherto discovered by any commentator and geographer, whether ancient or modern. The Greeks and Romans had never heard of a place so called on the S. E. coast of Africa.

But the proofs advanced in favour of this hypothesis, by Bruce and those who preceded him, however plausible and ingenious, have been ably combated by the learned Dr. Doig. This gentleman supposes that the Tarshish of Solomon and Hiram was the ancient *Bætica* (Andalusia) in Spain, and that Ophir lay somewhere to the W. of the Cape of Good Hope. It is agreed on all hands that Tarshish the son of Javan, or his immediate descendants, settled in Asia Minor, Italy, and Spain, countries in a directly contrary position to the Tarshish of Bruce mentioned above. The inhabitants of Tarshish are every where in sacred scripture said to be addicted to navigation and commerce, in which they seem to have been connected with the Tyrians and Phenicians, who were always said by the Jews to inhabit the isles of the sea. We are told by Moses, that by Elishah and Tarshish, Kittim, and Dodanim, the sons of Javan, were the isles of the Gentiles divided in their lands. In Hebrew geography all the countries N. W. of Palestine, and divided from it by the sea, were called the isles of the Sea.⁴ In Isaiah we find

Tarshish connected with Chittim, and Sidon, and Tyre. Now, whether Chittim was Macedonia, or Greece, or Cyprus, it is at any rate clear that it lay in the west. It is also clear from Ezekiel xxvii. 12., that the inhabitants of Tarshish traded in the markets of Tyre with silver, iron, lead, and tin. As a farther proof that Tarshish lay very far west of Judea, the conduct of the prophet Jonah may be quoted. Where did he intend to go? To flee to Tarshish. Where did he embark? At Joppa. Now Joppa was the sea port of Judea on the Mediterranean. It is exceedingly improbable that Tarshish here mentioned was the Tarsus in Cilicia, for that city lay north from Joppa, at no greater distance than 5 degrees. It is much more likely, therefore, that the Tarshish of scripture, was Tartessus in Spain. There were three cities so called by the ancients, one of which was situated at the mouths of the Guadalquivir, or Bætis, in Andalusia. The other two were founded by the Phenicians, but the first they found already built by the immediate descendants of Tarshish, who gave it this name from their father the son of Javan. In this delightful region of Andalusia, were the Elysian fields of the Pagan poets, who derived their descriptions from the Phenicians, who denominated the tract in the vicinity of Tarshish, *Mechos Elysoth*, the Land of Joys. Long before it was known to the Romans, the ease and affluence of the princes of Tarshish, had passed into a proverb in the days of the Tein bard.

My wish—were wishes to be got—
Is not for Cornucopia's store,
Nor o'er Tartessus be my lot,
To reign a hundred years or more.

That it was actually furnished with those articles mentioned in scripture, all the authors of antiquity who have mentioned that region attest. They describe it as the native land of silver, lead, iron, and tin, as also of gold in very large quantities. To quote them all would be tedious, and to call their accounts in question, would be to deny the faith of human testimony. "Nowhere," says the judicious and accurate Strabo,⁶ "has so much silver, or brass, or iron been produced, or been hitherto found of such excellent quality at any time." Stephanus says, "The city of Tartessus in Iberia is so called from a river which flows from the mountain of silver, which river also brings down tin to Tartessus." Strabo⁶ says that the mountain at the source of the Bætis, was so called because it had mines of silver. By Ptolemy this mountain is denominated *Oropæda*, or the mountain *Peda*, which means the same thing, for in the Arabic language *Phed*, or *Phidda*, signifies silver. As tin is not an African production, and as the Tarshish of Asia Minor, or the Cilician Tarsus, did not produce the metals imported by Solomon's fleet, there seems no reason to doubt that they were brought from Tartessus, in Spain, which not only produced the above articles in great plenty then, but continued to do so as late as the 10th century, when the revenue of the Khalif of Andalusia, Abdalrahman III., amounted to 12,500,000 dinars, or more than six millions sterling, a greater revenue than was then possessed by any two European potentates. It must also be observed that silver was so

⁴ Psalm xlviii. 7.

⁶ Lib. 3.

⁷ Stephanus, de urbibus.

⁸ Lib. 3.

abundant in the days of Solomon, that, as scripture says, he made it be in Jerusalem as stones; and the reason of this is also assigned in the 21st verse of the very chapter where this latter circumstance is mentioned. "For the king's ships went to Tarshish with the servants of Hiram: every three years once came the ships of Tarshish, bringing gold and silver," &c.¹ Tarshish, therefore, and Tarshish only, was the place whence this superabundance of silver was brought: Ophir was not the place of its production; it produced gold only.

Ivory was another production imported from Tarshish by Solomon and Hiram's fleet, and it is stated further by the prophet Ezekiel, when describing the commerce and manufactures of Tyre, that the company of the Ashurites made his benches of ivory, brought from the isles of Chittim. The Tarshish in question, therefore, appears to have been the Tartessus or Tarselmum of the Greek and Roman historians and geographers, situate beyond the Pillars of Hercules, or western extremity of the Mediterranean, at the mouths of the Bætis or Guadalquivir.

In the sacred narrative of Solomon's commercial expeditions, Ophir is always connected with Tarshish; the fleets of Solomon and Hiram commenced their voyages to both places from the same points, namely, the ports of Elath and Eziongeber. We are told that Jehoshaphat joined himself to Ahab,² to make ships to go to Tarshish, and they made the ships in Eziongeber. Had they meant merely, that they should go to Tarshish, the end would have been better answered, to build and send them from Joppa, for had Tarshish alone been the terminus of the expedition, it would have been absurd to build them on the shore of the Red Sea, as in that case they must have circumnavigated Africa to arrive at Tarshish. But we read that Jehoshaphat made ships of Tarshish to go to Ophir for gold, but they went not, for the ships were broken at Eziongeber.³ Here the one passage is elucidated by the other. The ships were made for Tarshish, to go to Ophir for gold. They were first to go to Ophir, and then to Tarshish. From these passages it is plain, that the voyages of Solomon and Hiram in the one case, and of Jehoshaphat and Ahab in the other, were to Ophir, and then to Tarshish, setting out for the same ulterior point—Tarshish. Of course, the traders would obtain the gold easily enough on the coast of Guinea, or, what is now denominated, *the Gold Coast*. The ivory would be obtained on the Ivory Coast, or perhaps, on the Barbary coast opposite Tarshish. On the African coast, they might easily procure apes, baboons, monkeys, and others of the simia tribe, as Hanno did, in a subsequent voyage; and peacocks, or rather parrots and paroquets, they might catch in the forests that abound on the coast. In Spain, at the port of Tarshish, they would obtain gold, silver, black and white lead, tin, and iron, the native productions of that region, and then shape their course homewards, through the straits of Gibraltar to Tyre or Joppa. Had they found the golden fleece at Sofala, on the eastern coast of Africa, or any other part of the same coast, they would have chosen to return and disload the precious cargo at Elath or Eziongeber, rather than pursue a long and

dangerous course, quite round to Tarshish on the Spanish coast. To this last place they might have directed their course much more commodiously from Zidon, Tyre, or Joppa. But being obliged to double the Cape of Good Hope, in quest of those articles they were enjoined to import, as tin, silver, lead, ivory, &c., they pushed upwards to Tarshish, and returned by the Mediterranean. Their next voyage commenced from Tyre and Joppa, from which they directed their course first to Tarshish, and having taken in part of their cargo here, they then coasted round Africa, touching at the Ivory and Gold coasts, and so arrived once more at Elath or Eziongeber. What was the space of time consumed in these voyages, scripture expressly tells us, that once every three years came the ships of Tarshish. This is such a space of time as one would suppose necessary to perform such a distant voyage, at a period when navigation was still in its infancy, and mariners were seldom accustomed to lose sight of the coast. Of this we think there is an irrefragable proof in the account of a voyage round the very same continent, undertaken and accomplished in the very same space of time, a few centuries after. The account of this voyage is preserved in Herodotus. He tells us, that Necho, one of the latter kings of Egypt (Pharaoh Necho of scripture), built a great number of ships both on the Red Sea and the Mediterranean; and that the same enterprising monarch projected a voyage round Africa, which was actually accomplished in the space of three years. In the conduct of this enterprise he employed Phenician sailors, as Solomon had done before him. These, we may very well suppose, were assisted in the course of this voyage by charts or journals, or at least by traditional accounts derived from their ancestors. "These navigators," says Herodotus, "taking their course from the Red Sea, entered into the *Southern Ocean*; on the approach of autumn they landed in Libya, and planted some corn in the place where they happened to land themselves; when this was ripe, and they had cut it down, they again departed. Having thus consumed two years, they in the *third* passed the Columns of Hercules, and returned to Egypt. Their relation may obtain attention from others, but to me it seems incredible; for they affirmed, that having sailed *round Africa*, they had the sun on their right hand. Thus was Africa for the first time known."⁴ The very circumstances which created doubts in the mind of Herodotus, namely, having the sun on their right hand, is a strong confirmation of the alleged fact; for this, as the learned Larcher remarks, could never have been imagined in an age when astronomy was yet in its infancy. Now let it be remarked, that Phenician mariners navigated the fleet of Solomon—the same people conducted that of Necho; the fleet of Necho spent three years in the voyage—that of Solomon did the same four centuries before; the fleet of Necho sailed from a port on the Red Sea—that of Solomon took its departure from Elath, or Eziongeber, situated on the same sea; such a coincidence of circumstances proves almost demonstratively, that the navy of Solomon and Hiram circumnavigated Africa in the same manner as that of Necho, 400 years subsequent.

It is difficult to conceive how Necho should have sent such an expedition, and that under

¹ 2 Chron. ix. 21.

² 2 Chron. xx. 36.

³ 1 Kings xxii. 48.

⁴ Lib. ii. c. 149. lib. ix. c. 42. ⁵ Meipomene, c. 42.

the conduct of the Phenicians, from the Red Sea, with instructions to return by the Pillars of Hercules and the Northern Ocean (Mediterranean), but on the hypothesis that he had heard that it had been performed at some preceding epoch. It is true, indeed, that Gosselin and Dr. Vincent are strongly against the notion that Africa could be circumnavigated by such ships as those used by the ancients, and that in fact it was not so till the voyage of Vasco de Gama in 1493. But Major Rennel, in his *Geography of Herodotus Examined*,⁶ has proved, at great length, the possibility of the fact, and expresses his full conviction of the truth of the voyage reported by that historian; as also does Mr. Stevenson, in his luminous account of the Progress of Navigation and Commerce.⁷ In corroboration of this it may be added, that Pliny believed that Africa had been circumnavigated by Hanno, who sailed from Gades (Cadiz) round Africa to the Arabian Gulf, and by Eudoxus, who sailed from the Red Sea to Gades.⁸ Pomponius asserts the same thing.⁹ Eratosthenes and Strabo believed that Africa was surrounded by the sea, and the latter says that Africa was of a triangular figure, whose base was washed by the Mediterranean. Scylax says that Africa, in the opinion of some, was a peninsula. Herodotus also says that Xerxes, king of Persia, enjoined one Sataspes, a Persian of royal rank, who had been condemned for a capital crime to suffer death, to sail round Africa as a commutation for his punishment. He was directed to set out from Egypt by the Mediterranean, and to return to it by the Arabian Gulf. Sataspes accordingly set out, and after passing the Columns of Hercules, doubled the promontory of Solois, Cape Cantin, and steered to the south. Continuing his voyage for several months, in which he passed over an immense tract of sea, and seeing no probable termination of his voyage, he returned to Egypt, and thence to the court of Xerxes, giving, as an excuse for the non-performance of his instructions, that he could proceed no farther from the state of his vessel. In consequence of this, his former sentence was executed on him. It appears from this account, that the voyage was deemed practicable, though difficult and dangerous, as Sataspes did not deny the physical possibility of executing it, but only the possibility of performing it *with his vessel*. On the other hand, Xerxes gave no credit to his assertions, as he knew that the voyage had been performed by others, and of course thought that what had been done by others, might have been executed by him. Thus the assertion of Herodotus, respecting the circumnavigation of Africa, will no longer appear a mere tale, since no physical impediment existed to prevent its accomplishment, it being merely a coasting voyage, exactly suited to the construction of the ships of the ancients. The flatness of their bottoms required a much less depth of water than those of the moderns; and hence the ancient navigators were enabled to shelter them in any creek, or, in default of shelter, to draw them up on the shore, as our fishermen do their large boats. Moreover they, by keeping close to the shore, ran little hazard of missing such ports as suited them. Their ships also, from what has been above observed, when run aground, got off easier,

and suffered less than ours. Hence the circumnavigation of any coast could be much easier effected with their comparatively light and flat vessels than with ours. It has been objected, that the magnet was then unknown, and therefore that it was impossible to circumnavigate Africa. The want of such an instrument was, no doubt, an insurmountable obstacle to the discovery of America by the ancients, in-going to which, an extensive ocean must be crossed; but not so with respect to a coasting voyage, as was that of circumnavigating Africa. The early voyages of the Portuguese were no more than coasting voyages; and the discovery of a passage to India, by the Cape of Good Hope, might have been effected by merely coasting Africa, as the Portuguese did, though the magnet had never been applied to the compass; but in all human probability that of America never. It is true, indeed, that their progress would have been expedited by the aid of the magnet, as by its help a ship might sail on by night as well as by day. It is certain, however, that the Egyptian and Roman fleets sailed on a direct course of 1,750 geographical miles without a compass, to the Malabar Coast, although it took them 40 days. This, however, was done by favour of the monsoons, both in going and returning; but those who embarked in the American discoveries had variable winds to oppose their course, and a wider watery expanse to cross.

Thus the account of Herodotus serves to corroborate Dr. Dolg's hypothesis of the voyages of Solomon and Hiram, supported as the account of Herodotus is by the authorities of Pliny, Pomponius Mela, Eratosthenes, Scylax, and Strabo, who all, as well as Herodotus, believed that Africa was a peninsula, and that the Mediterranean, Atlantic, and Indian Oceans, by their junction, formed one great ocean, which they could neither have believed nor asserted, but on the authority of accounts derived from the Phenicians; and therefore what was done by Necho, might have been done by the fleets of Solomon and Hiram four centuries before. It is no valid objection that both Polybius and Ptolemy were ignorant of the peninsularity of Africa. Discoveries since made have been sometimes lost. It may seem strange that the voyage executed by the command of Necho was forgotten in Egypt in the days of Ptolemy; but the whole eastern side of the extensive continent of New Holland (if continent it may be called) was discovered by the Dutch only fifty years prior to the time of Captain Cook, and yet the knowledge of this fact was lost in Europe until the chart of the discovery was found in the Royal Museum, not many years since, and posterior to the death of that great navigator. Now, if such a fact could be forgotten throughout Europe in so short a period, and after the invention of printing, we need not wonder that the other should meet a similar fate, especially after such circumnavigations had been long out of use, and at a time when registers of facts were with difficulty preserved. But if Ptolemy denied the junction of the Atlantic and Erythrean, or Indian Seas, and consequently the peninsularity of Africa, the fact was well known in the east, as is evinced from the great Abulfeda, who contradicts Ptolemy in all these particulars, and who wrote a century and a half before the discovery of the Cape of Good Hope by Diaz, in 1486. Since, then, so many authorities concur in the belief that Africa had been sailed round by the Phen-

⁶ P. 672-713.

⁸ Lib. II. c. 67. v. 61.

⁷ P. 4-0.

⁹ Lib. III. c. 10.

cians, I have no hesitation in my belief that the ships of Solomon and Hiram might have sailed from the Red Sea, and returned by the Mediterranean; and conclude with the remark of the celebrated Rennel respecting the circumnavigation of Africa by the ships of Necho: "We cannot guess why it should be doubted at present, unless it be that the moderns wish to appropriate to themselves all the functions and powers of nautical discovery."¹

The Phenicians enjoyed their extensive maritime commerce without a rival for many ages; and, in the true spirit of monopoly, took every precaution to retain it. They were excessively jealous of the interference of foreigners with their trade, and kept their commercial discoveries a profound secret. It is no wonder, therefore, that we are comparatively ignorant of the extent of the ancient Phenician commerce. It was a regular practice, if not a fixed law with them, if at any time they observed a strange ship keeping company with their ships, or endeavouring to trace their track, to outsail her if possible; or, where this could not be done, to depart during the night from their proper course. It may be asked, if the Phenicians were so jealous of the interference of foreigners in their commerce, how came they to admit the subjects of Solomon to so gainful a participation of the trade with Ophir and Tarshish? Necessity and policy were the true causes of this measure. By the conquest of Edom, Solomon, the successor of the victorious David, became master of the commerce of the Red Sea. It was in his power to have totally excluded them from the ports of Eloth and Eziongeber, and to have stopped all communication by land between Tyre and the Arabian Gulf. He was thus possessed of the key of the Tyrian treasury; and it was solely by his permission that they could hope to preserve this lucrative branch of their trade. It was their interest, therefore, to conciliate the favour of the Jewish prince; and this could be done no other way than by admitting his subjects (or rather himself, for it appears to have been a royal monopoly,) to a participation in this gainful traffic. Solomon, on the other hand, was necessitated to employ the assistance of Tyrian mechanics, in the construction of the magnificent buildings he had in contemplation to erect. Besides, he could make no advantage of the commerce by the Red Sea to Ophir and Tarshish, without the assistance of Phenician mariners, as his own subjects were comparatively ignorant both of maritime science, and of those distant regions whence the Phenicians drew their wealth. The interest of both parties, therefore, dictated a mutual participation in the benefits of maritime commerce.

At what time Tyre was built and superseded Sidon is not known. It is, however, mentioned as early as the days of Joshua, under the appellation of Strong Tyre.² It rose to a pitch of wealth and commerce unrivalled in the ancient world, and of both a most picturesque and highly poetical description is given by the prophet Ezekiel, chap. xxvii.³ In its markets were congregated the natives of every clime and region, for

the purpose of exchanging their mutual commodities: as the merchants of Spain, of the coast of Italy, the Isles of the Mediterranean; Greece, Macedon, and Asia Minor; Pontus, Cappadocia, Colchia, Iberia, and Armenia; Syria and Palestine; Mesopotamia and Assyria, together with commercial agents from the numerous tribes that inhabited the Arabian peninsula, or dwelt on the shores of the Persian Gulf and the Red Sea. Tyre was, in fact, if we may so express it, the London of antiquity. She was not only a commercial but a warlike city, and kept in pay a numerous band of mercenaries, from different countries, enumerated by the prophet Ezekiel in the chapter where the extent of her commerce is so graphically described. By the strength of her fleet, and numerous garrison, she baffled the utmost efforts of Shalmaneser, king of Assyria, the mightiest potentate of his day. She withstood for a space of 13 years the power of the great Nebuchadnezzar; and, when at last the city was taken, the inhabitants founded New Tyre, in the adjacent isle, which exceeded the old city in riches and commerce. It was utterly destroyed by Alexander the Great; and though occasionally it rose again to importance, yet it no longer, as formerly, enjoyed such an extensive commerce, and gradually dwindled into insignificance; and is now, agreeable to the prediction of Ezekiel, like a top of a rock, a place to spread nets upon.

There are no facts in ancient history, that evince the Egyptians to have been a people addicted to maritime commerce. They were still more advantageously situated in that respect than the Phenicians, possessing, in addition to their maritime position on the Mediterranean, a large and navigable stream, running through their whole territory; and at no great distance from it, the Red Sea, a sea almost as favourable for commerce and navigation as the Mediterranean. Their advantages for inland commerce were also great; for, though the intervening deserts of Nubia and Barca might at first sight seem to oppose insuperable obstacles to commercial intercourse with the interior of Africa, yet Providence had benevolently and wisely provided for the difficulty arising from this source, by the creation of the camel, that ship of the desert, by whose means intercommunication could be carried on with the regions beyond the deserts, even to the shores of the Niger. Yet, notwithstanding these advantages, the Egyptians were decidedly averse to maritime affairs, whether commercial or warlike. They were an agricultural people, and could at any time command the introduction of foreign commodities, by the superabundance of their agricultural productions, which ensured them a supply of such articles as their own country did not produce. The country, besides, was nearly destitute of timber fit for ship-building; their sea coasts were unhealthy, and do not seem to have been so early inhabited as the higher parts of the country. The harbours also were few, of intricate navigation, and frequently changing their depth and direction. In addition to these circumstances, the advantages which the Nile, with its numerous canals, presented, for internal communication and traffic, precluded in a great degree the necessity of cultivating maritime commerce. Instead of trading to other nations, or visiting them, they staid at home, and were merely visited by foreigners; for it was one of their old established maxims, never to leave their own country: so that while the Red

¹ Geography of Herodotus, p. 676.

² Joshua, xix. 49.

³ A very elaborate commentary on this chapter has been given by Dr. Vincent, in his *Peripus of the Erythraean Sea*, vol. ii.; in which he satisfactorily describes the quality of most of the articles there mentioned, and the locality of the places whence they are said to have come.

Sea was covered with the fleets of the Tyrians, Edomites, Jews, and Syrians, not an Egyptian ship floated on that inland gulf. The low opinion which they entertained of commerce may be learned from Herodotus, who says, that the men disdained to meddle with it, and left it entirely to the women. The earliest account of traffic with Egypt, we have in the book of Genesis, where we find that the Midianites and Ishmaelites traded there as early as the time of Jacob. We are told, indeed, that, in the days of Sesostris, they had a large and extensive commerce, both on the Red Sea and the Mediterranean; and that in order to banish the prejudices of the Egyptians against the sea, Sesostris established a class of marines among his subjects. We are also told, that the same Sesostris planted an Egyptian colony at Colchos, at the head of the Euxine and mouth of the Phasis, and that this colony manufactured linen, built navies, and invented geographical maps. But such stories wholly depend on the authority of authors who lived at least 1200 years posterior to the facts they avouch. No weight, therefore, can be laid on them, unless supported by collateral evidence, but of this there is none. After the time of this mythic personage, for his existence is long anterior to all legitimate profane history, the only thing we can learn is, that the Phenicians carried on a lucrative commerce with Egypt; and for a long time they were the only people to whom the ports of Egypt were open, as we learn from Homer and Herodotus. The Egyptian commerce, therefore, was wholly engrossed by foreigners; for though colonies migrated from Egypt to Greece, yet these kept up no correspondence with the parent state. Horses, and fine linen, in the days of Solomon, constituted a chief part of Egyptian exportation.

The era of Psammitichus is the first period in the history of Egypt when decisive measures were adopted to root out the ancient and long continued antipathy which the Egyptians entertained against intercourse with foreigners, and from this time may be dated the commencement of Egyptian commerce. He was the first king of Egypt that opened his ports to foreigners in general. Commerce with the Greeks he particularly encouraged, though afterwards, either from jealousy of that people, or the still operating antipathy of the Egyptians to foreigners, the Greeks were not suffered to enter any port but Naukrates, which they had been permitted to build for the residence of their merchants, and convenience of their trade. This city lay on the Canopic mouth of the Nile, and if a vessel entered any other mouth of the river, the master was obliged to return to the Canopic branch; or, if the wind did not permit this, to unlade his vessel, and send his cargo to Naukrates by the country boats. Pharaoh Necho, the grandson of Psammitichus, was a monarch bent on maritime commerce, which is evinced by the history of his whole reign. For this purpose he attempted to unite the Mediterranean and Red Seas by a canal, but failed in the attempt. He employed Phenician mariners to circumnavigate Africa, and kept a large fleet in both the Red Sea and the Mediterranean. In the reign of Pharaoh Hophra, grandson of Necho, the Egyptians had the command of the Mediterranean Sea, and had they continued long after this a free and independent nation, they would undoubtedly have been still more famous for their maritime and commercial superiority; but the devastations of Egypt by the arms of Nebu-

chadnezzar, and the subsequent reduction of that country by Cambyzes, for a time arrested their career, and annihilated the political existence of the Pharaohs, or native sovereigns of the country. It has been well remarked by Dr. Vincent, that while Egypt was under the dominion of its native princes, Sidon, Tyre, Arabia, Palestine, Cyprus, Greece, Sicily, and Carthage, were all enriched by the trade carried on in its ports, and the articles of commerce which could be obtained there, and there only. The natives themselves were hardly known in the Mediterranean as the exporters of their own commodities. They were the Chinese of the ancient world; and the ships of all nations but their own laded in their harbours. As soon, however, as Egypt passed to the Persians, Macedonians, and Romans, it furnished large fleets; and under the Ptolemies, Alexandria rose into importance as the first commercial city in the world.

In the career of commercial enterprise, the Phenicians were succeeded by the Carthaginians, a colony of their own who had emigrated from Tyre, and founded Carthage. These colonists had the same commercial propensities as the inhabitants of the parent state. The situation of Carthage itself was eminently favourable for commerce, being in the very centre of the Mediterranean, in reach of the east as well as of the west, and having in her immediate vicinity the most populous and fertile part of Africa. The natives of this part of the African coast were also the most industrious and civilized of the African tribes. The extent of maritime territory possessed by this republic reached from the Philæan altars on the east, to the Columns of Hercules on the west. This large and fruitful territory not only supported the colonists with all the necessities of life, but also enabled them to export a vast quantity of surplus produce. As the Carthaginians themselves were emigrants from Tyre, the spirit of emigration was encouraged by the law of the state, which ordained colonies to be sent off the country, as occasion required, to different parts; and these colonists, keeping up their connexion with the mother country, not only drew off a part of her superabundant population and trade, but also supplied her with many articles she could not otherwise have procured at so cheap and easy a rate. Her exportable African productions were grain, wax, oil, honey, skins, fruit, &c. Her principal manufactures were cables, made of the root Spartum, and chiefly used for large vessels; all other kinds of naval stores; the Phenician purple; toys, &c. Her imports were flax and papyrus from Egypt; spices, gums, perfumes, gold, pearls, and gems, from the Red Sea; from the shores of the Mediterranean, silk, stuffs, scarlet, and purple dyes, &c.; and from the west of Europe, silver, iron, tin, lead, black and white, brass, and copper. By land they carried on a lucrative commerce with the Garamantes and the Ethiopians. The caravans of the latter generally resorted to Carthage. The most valuable articles brought by these caravans, were those gems denominated carbuncles, which, by means of this mode of traffic, became so common in Carthage, that they obtained the name of Carthaginian gems. Their mode of trading with rude nations unaccustomed to commerce, is mentioned by Herodotus,⁴

⁴ Lib. 4.

and strongly resembles that adopted by our navigators when they arrive on a savage coast. The Carthaginians trafficked with the Libyans, who inhabited the western coast of Africa, in the following manner.—Having conducted their vessels into a convenient creek or harbour, they landed the merchandise which they meant to exchange or dispose of, and placed it in such a situation and manner as exposed it to the view of the inhabitants, and at the same time indicated the purpose for which it was thus exposed. They then lighted a fire of such materials as caused a great smoke. This attracted the Libyans to the spot, who laid down such a quantity of gold, as they deemed an adequate price for the merchandise, and then the Carthaginians approached, and examined the gold. If they deemed it sufficient, they took it away, and left the merchandise. If they did not, they left both. In the meantime, the Libyans again returned, and added to the quantity of gold, and this, if necessary, was repeated, till the Carthaginians, by taking it away, showed that, in their judgment, it was an adequate price for their goods. During the whole of this transaction, no intercourse of words passed, nor did the Carthaginians touch the gold, nor the Libyans the merchandise, till the former took away the gold.

Spain was to the Carthaginians, as it had been to the Phenicians, a vast source of metallic wealth. At what time they first established themselves in Spain is unknown. All that is known respecting the fact, is, that the people of Cadiz, a Phenician colony, finding themselves hard pressed by the natives, applied for aid to the Carthaginians, which proving effectual, the latter embraced the opportunity of establishing themselves in the country adjoining that city. According to Diodorus Siculus, the Carthaginians were enabled, principally by the silver which they drew from the Spanish mines, to equip and support their numerous and oft-renewed fleets. According to Strabo, when the Carthaginians first colonized Spain, silver was so abundant, and so easily obtained, that their most common utensils, and even the managers for their horses were made of it. As Spain was therefore a mine of wealth to whoever possessed it, it is easy to divine the motives of the Romans in using such strenuous efforts, to dispossess the Carthaginians of it, and to make a complete conquest of the whole peninsula.

The gradual advances of the African republic, in commerce, wealth, and maritime power, are by no means given so minutely and distinctly as could be wished. The Carthaginian history and character have been given by the Greek and Roman writers, people hostile to them, and, therefore, by no means disposed to do them justice. For more than three centuries after the foundation of Carthage, there is a total blank in its history, and it is not till the Carthaginians come in contact with the Greeks in Sicily, and afterwards with the Romans, that much notice is taken of Carthage, its commerce and power. All we know of their early history, is, that they conquered the Balearic Isles at the time they seized Cadiz. We find that they obtained possession of Cyrenus or Corsica, in the reign of Cyrus, the Phœcean fleet being so disabled as to oblige that people to abandon the island to the Carthaginians and Etruscans. Soon after this, they conquered Sardinia, and obtained footing in Sicily. Herodotus tells us, that Cambyses, the son and successor of Cyrus, resolved to

conquer the Carthaginians, subsequent on his reduction of Egypt, but was forced to drop his design, on account of the Phenicians, who refused to help him against their descendants. Hence it is evident, that the whole power of the Persian empire was unable to execute any thing effectively against the Carthaginians, without the help of the Tyrians. In the year 503 before Christ, and the year after the expulsion of the Tarquins, a treaty was made between the Carthaginians and Romans, by the articles of which, we learn, that the whole of Sardinia, and part of Sicily, were then possessed by the Carthaginians, that they were well acquainted with the coasts of Italy, were well versed in the art of fortification, and made it their usual practice to build castles and erect forts, on making a descent on any coast. They were also particularly careful by this treaty to exclude the Romans from all the territories subject to them, and from all knowledge of what was transacting in them, and expressly prohibited the Romans from sailing beyond the Fair Promontory, to the N. of Carthage, lest they should discover the fruitfulness of the land, the happy situation of the cities, and consequently be tempted to make a settlement there. A second treaty was made with the Romans, 333 years before Christ. By this agreement, the latter and their allies were to possess the friendship of the people of Tyre. In case any town in Italy not under the Roman jurisdiction were taken by the Carthaginians, they might plunder it, but after that, they were to give it up to the Romans. Roman captives in any town taken by them, and challenged by the Romans as belonging to them or their allies, were to be immediately restored. The Romans, in case they put into any harbour belonging to the Carthaginians or their allies, to take in water or any other necessities, were not to be molested or injured; but they were not to carry on any commerce in Africa or Sardinia, nor even land on these coasts, except to purchase necessities, and refit their ships. In such cases, only five days were allowed them, on the expiry of which, they were to depart.

The only historical accounts we possess of Carthaginian voyages, for purposes of commerce or discovery, are those of Himilco's and Hanno's. That of the former is given by Aulus, a Roman geographical poet, who lived in the reign of the second Theodosius, who says that he saw the original copy of the voyage in the Carthaginian annals. According to this author, Himilco sailed for the space of four months towards the north, and arrived at the Isles Ostryimides and the coast of Albion. In these parts the East Rymil lived, with whom the people of Tartessus and Carthage traded. In the account of this voyage, lead and tin are often mentioned. Mention is also made of ships cased with leather, (similar to the Welsh coracles).

The voyage of Hanno is of much more importance than the former. He was sent by the senate of Carthage to explore the western coast of Africa, and to establish Carthaginian colonies wherever he might think it proper. He sailed from Carthage with a fleet of 60 vessels, each rowed with 50 oars, and had besides, a convoy containing 30,000 persons of both sexes. He wrote a relation of this voyage, a fragment of a Greek version of which is all that remains, and which has been illustrated by the learning and ingenuity of Dr. Falconer of Bath, as also by Major Rennel in his Geography of Herodotus

Examined.¹ This voyage is quoted by Aristotle, Mela, and Pliny. At what time it was performed, has not been ascertained, but is believed by Rennel to have been subsequent to that of the Phenicians by the command of Necho. The Carthaginian or Liby-Phenician cities founded by Hanno, were all situated between the straits of Gibraltar and the Senegal river, and, except Cerne, (the modern Arguin,) north of Cape Bojadore, the Atlas Major of the ancients. Some modern authors, as Mickle the translator of the *Lusiad* of Camoens, assert in unqualified language, that Hanno doubled the Cape of Good Hope, others, as Gosselin, limit the whole extent of Hanno's voyage to Cape Nun, on the coast E. of the Canary Isles, near 10 degrees N. of Cerne. This latter gentleman makes that cape the southern boundary of ancient knowledge, on the western coast of Africa, and asserts, that the ancients never went farther than 180 leagues S. of Gibraltar. At this rate, Ptolemy's knowledge of this coast could extend no farther, and the rivers Senegal and Gambia were unknown to him. But this assertion has been completely refuted by Rennel. According to Gosselin, Hanno took not less than 32½ days in sailing from the Straits of Gibraltar to Cape Nun, or only 17 miles a day. D'Anville and Rennel nearly agree in their opinions respecting the limit of Hanno's voyage, which they fix at the point of Sherbro' Sound. Farther he could not go for want of provisions, having failed in his attempt to open a communication with the natives of the coast.

The chief particulars of the voyage are the following:—Having founded the first colony, Thymaterium, two days' sail beyond the Pillars of Hercules, (94 geographical miles direct from Tingi, or Tangier,) proceeding thence, towards the west, they came to Soloeis, a promontory of Libya (Cape Cantin) thickly covered with trees, where they erected a temple to Neptune, and again proceeded half a day towards the east, to a lake near the sea, full of reeds, and where elephants and other wild animals were feeding. Passing the lake two days' sail they founded other five cities, near the sea, Caricontichos, Gytæ, Acra, Melitta, and Arambys, thence they came to the great river Lixus, (Wad-al-Drac of Abulfeda,) which flows from Libya, (or rather from mountains situated amongst the Ethiopians,) and has on its banks the Lixitæ, a shepherd tribe, with whom they continued sometime on friendly terms; and beyond them dwelt the inhospitable Ethiopians. Leaving their friends (the Lixitæ) after obtaining interpreters from them, they coasted a desert shore three days, and arrived at the Isle of Cerne. Their course was to the south during the two first days, and to the east the third day. From Cerne they coasted 12 days along the shore of the Ethiopians; on the last of which days they approached some large mountains covered with trees, the wood of which was sweet scented and variegated. This corresponds to the description of the coast between Arguin and Cape Verd; for after two days' sailing round these mountains they came to an immense opening of the sea, on each side of which, towards the continent, was a plain. This is perfectly descriptive of sailing round Cape Verd, and of their arrival at the wide opening of the Gambia, known to them only as a wide

opening of the sea. It must be remarked here, that this was the second time they had sailed S. from Cerne, and that the first time they went no farther S. than the Senegal. Leaving Cerne for the first time, they sailed up the river Chretes, (river St. John, 60 miles southward of Cerne). This river led them to a lake which contained three islands larger than Cerne, from which, proceeding a day's sail, they came to the extremity of the lake that was overhung by large mountains, inhabited by *savage men*, clothed with skins of wild beasts, who drove them away by throwing stones, and hindered them from landing. This corresponds to Cape Mirie. Sailing thence, they came to another river which was large and broad, and full of crocodiles and river horses, whence returning, they came again to Cerne. It may be here observed that no kind of traffic was opened with any of the tribes S. of the Lixitæ, as all the coast was hostile S. of Cerne; hence the natives are termed the inhospitable Ethiopians. These Ethiopians may be either the Leucæthiopes, whom Pliny² places N. of Nigritia, or the Assanagi tribe to the N. of the Senegal, who are not negroes. Sailing from the Gambia, they coasted close along the shore for five days, and came to a large bay which their interpreters (the Lixitæ) told them was called the Western Horn. In this bay was a large island, and in the island a salt water lake, and in this another island where, when they had landed, they could discover nothing in the daytime but trees, but in the night they saw many fires burning, and heard the sound of pipes, cymbals, drums, and confused shouts. They were then terrified, and their *diviners* ordered them to abandon the island. This corresponds to the large Bay of Bissao, containing in its bosom several islands, and is 190 miles S. E. of the mouth of the Gambia, which agrees well to five days' sailing, and what is more, no other part of the coast forms a sound of such a shape as to answer in any degree to that of a horn. It is true, indeed, that Pliny and Ptolemy, who in this are followed by D'Anville and Bougainville, refer the horns to promontories and not to inlets of the sea. But both the term and the description completely set aside such an idea. They were bays or gulfs, and contained islands; and the island in the western horn with the rest in this gulf, are flat alluvial tracts formed by the depositions of the Rio Grande and other streams that roll down vast quantities of mud and sand when swollen by the periodical rains. Leaving this inlet, they passed by a country which was on fire, and streams of fire appeared to run into the sea. They sailed quickly thence, and at the end of four days discovered at night a country full of fire. In the middle was a lofty fire larger than the rest, which seemed to touch the stars. When day came they discovered it to be a large hill called the *Chariot of the Gods*. On their departure thence, after three days' sailing, they came to a bay called the Southern Horn, at the bottom of which lay an island, as in the former, having in it a lake, and in that lake another island full of savages. It was here that the Gorillæ were found, described in the narrative as hairy women. This sound was the termination of the voyage of Hanno, in about seven degrees N. latitude, and 42 degrees N. W. of the Cape of Good Hope.

1 P. 714—745, inclusive.

2 Lib. v. c. 8.

The authenticity of this voyage has been called in question, on account of the stories of torrents of fire running into the sea, and the hairy women mentioned above. The former were nothing more than the flame caused by the burning of the dry herbage, a practice common to every country belonging to warm and moist climates, where the vegetation is rank. The appearance of a river of fire running into the sea, arose from the more abundant vegetation of the valleys or ravines, which are shaded by their depth, and remain longest green. These being last burned, the fire would then be confined to the hollow parts of the country, and when fired from above, would have the appearance of rivers of fire running to the shore. As in other places they saw the whole country as if on fire, it may be justly inferred, that it was then the season of burning the rank and dry herbage. A similar phenomenon was observed by the much lamented traveller Mr. Park,¹ in the high country of Manding, and a similar practice of burning the dry herbage is observed in Luddamar, and other Moorish countries on the southern border of the great desert of Sahara. It may also be observed, that a similar practice has, from time immemorial, been adopted by the Indians of the United States, to the E. and W. of the Mississippi. The *Theon Ochema*, or Chariot of the Gods, is identified in the lofty conical mountain of Sagres, nine degrees, 24 minutes N. lat., and which is the termination of a lateral chain of mountains, striking off from the great inland chain, and running down to the shore. This inland chain is connected on the S. E. by lateral chains of hills, with the mountainous coast of Sierra Leone, which has an extent of 24 miles. The mountains on this part of the coast are so lofty, as to be visible 20 and 25 leagues off at sea. Vossius, who in his notes on Mela, makes the *Theon Ochema*, or Chariot of the Gods, the mountain of Sierra Leone, in his usual way of exaggerating, states it to be so high, as to be seen at more than 250 miles distance at sea.² Respecting the hairy women, called Gorilla by the Lixite, Hanno's interpreters, Gorgons, by Diodorus Siculus, and Gorgades by Pliny, it is plain that they were apes, of the species called Pongo by Buffon. The male Pongos could not be caught by Hanno, as they fled to inaccessible precipices, and defended themselves by throwing stones. These are never taken alive, because of their great strength, unless by killing the females, they take the cubs that hang fast upon the mother. Three females were taken by Hanno, but they so annoyed their conductors with their teeth, that they were compelled to kill them, and bring their skins only to Carthage. Long before this voyage of commerce and discovery, the Carthaginians had discovered the Fortunate Islands, or the modern Canary Islands.

The site of Babylon, only 259 miles direct distance from the head of the Persian Gulf, eminently fitted it for a great commercial city. In the days of its prosperity it enjoyed the navigation of the Tigris and Euphrates. Up to the confluence of these rivers, the combined stream was navigable by large vessels, and above the confluence, the Euphrates was navigable by small vessels, to above Babylon, even by boats. Goods could be carried up as far as Thapsacus,

and be thence dispersed in all directions by land. Terebinth, at the mouth of the Euphrates, was the port of Babylon. All the commerce of the Persian Gulf and the Erythrean Sea, except what was conducted up the Red Sea, centred in Babylon. The produce of the East passed from Babylon up the Euphrates, to the great southern bend, where it touches on the Syrian Desert, either by land caravans, or by boats, and from thence to the Mediterranean, whence it was conveyed to Asia Minor and Greece. In the days of Babylonish power, travellers and caravans were not exposed, as in subsequent times, to be robbed by the Arabs of the desert. A chain of protecting posts was kept up the whole way along the line of the Euphrates, for the protection of the inland route, from the Persian Gulf to the Mediterranean. These not only ensured the safety, but also supplied the wants of the caravans, especially in water, that necessary beverage in a hot and thirsty climate. Travellers describe the banks of the Euphrates, between Thapsacus or Ul-Der, and the great plain of Babylonia, to be studded with cities, towers, and castles, either in a state of absolute ruin, or of great decay, in much the same state, in fact, as Xenophon found it, nigh a century and a half after the capture of Babylon and ruin of her commerce. So long as the caravans could traverse the intermediate space between Babylon and the Mediterranean without danger, this route was much more commodious than that by the way of the Red Sea, or traversing the whole of Arabia from south to north, as they were always certain of a good supply of water and herbage for themselves and their camels, so long as the river did not diverge from the line of their route. Babylon was not only the mistress of an extensive commerce, but also was noted for her extensive manufactures of cloths, dyed stuffs, and pottery. Purple cloaks interwoven with gold, purple hangings, and couches interwoven with the same material, and tiaras painted of various colours, were manufactured there. So early as the days of Joshua, the Babylonians were celebrated for their manufactures of linen and woollen cloth; for amidst the spoil taken from the Canaanites, Achan secreted a goodly Babylonish garment, or cloak of Shinar, as it is called. But after the subversion of the Babylonian empire, her commerce and manufactures declined, in consequence of the seat of government being transferred to Susa, and the measures of the Persian monarchs, who out of hatred to Babylon, and aversion to commerce, threw booms across the channel of the Euphrates, and thus stopped the navigation of the river. Babylon, thus deprived of her commerce with the Persian Gulf and India, lost her wealth. Alexander intended to restore the commerce of Babylon, and remove the booms above mentioned, but was prevented by death from accomplishing his design. His successors, not inheriting the same partiality for Babylon, allowed the navigation of the Euphrates to remain obstructed as before, and Babylon insensibly dwindled into insignificance, and finally to ruin.

The political catastrophe of Babylon, and the ruin of the commerce of the Euphrates, was followed by that of all the cities on the route of the Euphrates, through the desert to Thapsacus, whose existence depended on that commerce; for so many towns in such an arid desert could not possibly be supported otherwise. After the fall of the Persian empire, the inland route from

¹ P. 259, 300.

² P. 406.

the Persian Gulf to the Mediterranean was again restored under the auspices of the Seleucids, and continued under a regular system of protection till the discovery of the Cape of Good Hope, and the passage to India by sea. Since that event, that route is now wholly deserted, except for the purpose of an over-land despatch from India to England. No caravans laden with the produce of India or China now traverse the desert—the majestic Euphrates now rolls her waves through the solitary waste, unfrequented, save by tribes of wandering Arabs, and the cities of Palmyra, Corsote, and Chilmad, have ceased to exist.

The epoch of Grecian commerce and navigation commences with the celebrated Argonautic expedition, about 1280 years before Christ. It is not easy to determine whether this enterprise was piratical or commercial. Its avowed object was the Golden Fleece; but what that was can only be conjectured. It is difficult to conceive how the Greeks of that age, a rude and barbarous race, could engage in such a distant commercial speculation; and it is equally so, how they could venture on a plundering expedition so far from home, and through a dangerous and difficult sea, when that propensity could be easily gratified nearer their own shores. That the mountainous country of Colchis then abounded in the precious metals is well known, and the gold and silver mines to the south of Trebisond are still wrought with profit. The report of this metallic wealth had previously reached the Greeks, and excited their avarice, as in modern times the report of an El Dorado, in South America, roused the cupidity of a Raleigh. Whatever was the real object, the fact of such a naval adventure is believed by the generality of historians and chronologers. In their course to the Euxine Sea, they visited Lemnos, Samothrace, Troas, Cyzicum, Bithynia, and Thrace. Such wanderings evince Grecian ignorance of the navigation of those seas. From Thrace they steered their course direct to the Euxine Sea. The Cyanian rocks, four or five leagues from the entrance to that sea, previously deemed impassable, were passed by these adventurers without danger and difficulty, and their due situation and form ascertained. They then entered the Euxine, where they seem to have been driven about for some time, till they discovered Mount Caucasus, which served them as a landmark to the entrance of the Phasis, when they anchored near Eea the capital of Colchis. With regard to their return home, so much contradiction and fable has clouded the narrative, that it would be useless to attempt its elucidation. All agree, however, that they did not return the same way as they came. The Trojan war, subsequent to the Argonautic expedition, fifty years according to some, and a century according to others, is illustrative of the maritime power and skill of the Greeks at that period. The number of ships employed in that war were 1,186 according to Homer, 1,200 according to Thucydides, and 1000 according to Virgil. The Boeotian ships were the largest, carrying 120 men each; those of Philoctetes only 50 men each; Athens alone, of all the Grecian states, furnished her own ships, amounting to 50. Thucydides says, that the Grecian ships then employed had no decks; but in this he is contradicted by Homer. It would appear, however, from the Homeric account, that the fore part was open to the keel, and therefore might be half decked. Each ship had a mainsail, and was rowed by oars.

The people of Egina are represented as the first people in Greece who were distinguished for their intelligence and success in maritime commerce. Soon after the return of the Heraclids into Peloponnesus, these people possessed considerable maritime traffic, and were for a long time masters of the adjoining sea. The Corinthians, soon after the Trojan war, seem to have embarked in commerce with great spirit and success. For this their situation was particularly fitted, and equally well suited to be the transit of the land trade of Greece. The Corinthians are said to have first built vessels with three banks of oars, instead of galleys. Between the age of Homer and that of Herodotus, the Greeks spread themselves over several of the countries lying on the Mediterranean Sea. About 600 years before Christ the Phocæan Greeks from Ionia founded Massilia, the modern Marseilles; and between the years 500 and 430 before Christ the Greeks had established themselves in Sicily, Sardinia, Corsica, and even in some of the southern parts of Spain, as the famed Saguntum. These settlements were the effect either of the prospect of commercial advantages, or of intestine wars. Their emigrations they were enabled to accomplish by the geographical and naval charts which they are said to have obtained from the Phenicians, or the sphere of Anaximander of Miletus. The eastern parts of the Mediterranean were still unknown to the Greeks. Homer tells us that none but pirates ventured at the risk of their lives to steer directly from Libya to Crete. Such was the ignorance of the Greeks of the hydrography of their own seas, in the time of the Persian invasion by Xerxes, that when the Ionian deputies arrived at Egina, earnestly desiring the Grecian fleet to sail to Ionia, to deliver their country from Persian domination, the request was refused, because the Greeks were ignorant of the course from Delos to Ionia, and because they believed it to be as far from Egina to Samos, as from Egina to the Columns of Hercules.

Of all the states of independent Greece, Athens and Corinth were the most commercial, but especially the former. Athens possessed three harbours for shipping, the Phalerum, the Munychion and the Piræus. Of these, the first was the most ancient, and the last the most celebrated. The Phalerum was abandoned in the time of Themistocles, who advised his countrymen to concentrate their commercial and military fleets in the harbour of the Piræus, which stood 3 miles distant from Athens. By his advice both city and harbour were enclosed with a wall, 7½ miles long, and 60 feet high. This wall was constructed of immense square stones, fastened together with cramps of iron, and so broad that two waggons abreast could be driven along it. The Piræus contained 3 docks, 5 porticoes, and 2 forums. It was so celebrated for its commerce that it became a proverbial saying in Greece, *Famine does not come from the Piræus*. Themistocles also obtained a decree, by which 20 ships were to be annually added to the Athenian fleet. For this purpose, the sums arising from the sale of the privileges of working the mines, or the eventual profits of the mines, which had formerly been distributed among the people, were set apart. A tax was subsequently imposed for this purpose on all landholders, merchants, and manufacturers. All these classes were obliged also to keep up and increase if

occasion required it, the naval force of the republic. When it was judged necessary to fit out an armament, as many talents as there were galleys to be equipped were raised in each of the ten tribes of Athens. The money thus collected was given to the captains of the galleys, to be expended in the maintenance of the crew. The republic furnished the rigging and sailors, and each vessel had two captains who commanded six months alternately.

Ship-building was very dear at Athens, for though their ships both for war and commerce were small, compared with those of modern days, and even though the latter were much smaller than those of the Phenicians, yet the light vessels could not be kept in commission for a smaller sum than £8000 annually, though the utmost attention was paid to economy, and no extraordinary damage occurred. The large vessels, of course, must have cost twice that sum annually. The foreign commerce of Athens extended to the shores of the Euxine, the Propontis, the Isles of the Ægean Sea, and the wide expanse of the Mediterranean, Thrace, Macedonia, Thessaly, Phrygia, and Ionia. From the Euxine were imported corn, timber for ship-building, slaves, salt, honey, wax, wool, leather, and goat skins; salt fish, and timber, from Byzantium and other ports of Thrace and Macedonia; from Phrygia and Miletus, carpets, bed-coverlets, and fine fleeces for manufacturing woollens; from the Isles of the Ægean Sea, wines and fruits; slaves from Thessaly, Thrace, and the coasts of Asia Minor; and corn from Eubœa. They also had a large commerce in aromatics, paints, cosmetics, drugs, gums, &c. In Athens, there were large and numerous markets for the sale of these last articles. Even in the time of Hippocrates, the spices of India and Arabia were common, at least some of them, in the Peloponnesus and Attica. The Greeks probably obtained these by means of the Phenicians, or from some grand depot to which their merchants travelled, and to which these articles were brought from the east. It is clear, however, that from the nature of trade in those ancient times, the Athenian merchants were obliged to be constantly travelling from place to place, either to celebrated games or fairs where an advantageous speculation might be made. They were well acquainted with the interior of Germany, for they knew not only the length of the Hercynian forest, but also the direction of all the great rivers in that region. In search of yellow amber, they penetrated to the mouth of the Vistula, which the Phenicians were wont to reach by sea. The Athenian merchants had also factories established along the Cimmerian Bosphorus, and clerks who remained there during the winter, to prepare cargoes for exportation in summer. These Scythian exports were either paid for in money, or exchanged for Grecian wines.

The commerce of the Euxine was carried on in very small vessels, each having only twenty rowers, and a cargo whose entire value did not exceed 5 or £600 sterling. As the Euxine was deemed a dangerous sea, the Athenians were afraid of risking large cargoes on a single chance. The chief imports of the Athenians were corn and slaves. So barren was Attica, that the Athenians were compelled to apply themselves to maritime commerce, in order to obtain subsistence for a population far too numerous for its ungrateful soil, and were

under the constant necessity of purchasing their food from strangers, and often at the hands of their enemies. Their chief source of supply was the Crimea; it was therefore their interest to be on good terms with the sovereigns of the Cimmerian Bosphorus. One of these favoured the Athenians very much, in the time of Demosthenes, and exempted their vessels from paying the duty on corn, to which all other vessels were subjected on its exportation, and allowed their merchants a free trade to all parts of his kingdom. In return, the Athenians declared him and his children citizens of Athens, and granted to such of his subjects as traded in Attica the same privileges and exemptions which their citizens enjoyed in the Cimmerian Bosphorus. The Athenians also traded to Pantecapœum for corn, and wheat was imported from Sicily and Egypt. The quantity they imported from the Crimea, is stated by Demosthenes to have been 400,000 medimni, or bushels, or 51,000 English quarters annually, as appeared from the customhouse returns. This was by far the largest quantity of wheat they received from any foreign part. As this article was a matter of the greatest moment to a country which produced almost no grain, magistrates were appointed, whose sole care was to lay in corn for the use of the city, and other officers were also appointed to regulate its price, and fix the assize of bread. Two officers were stationed in the Piræus, whose business was to see, that two-thirds of all the corn brought into the port, should be carried to the city.

The duties on corn and other merchandise were very high, amounting to one fifth, or 20 per cent. The same was also imposed on articles exported. These duties were generally farmed. In an oration of Andocides, we learn that he had farmed the duty on foreign merchandise imported, at twelve talents annually. In consequence of the high duties, smuggling was carried on to a great extent, especially in the small district of Corydale, to the north of the Piræus. In it was a small bay, called Thieves' Harbour, where a most lucrative smuggling trade was carried on, in which ships of different nations were engaged. Though this contraband commerce was carried on under the very nose of the Athenian state, being in Attica itself, and greatly injured the revenues of the state; yet the Athenians durst not put a stop to it, as the inhabitants of Corydale were sovereigns in their own territory. This we learn from Demosthenes.

There were no shops in Athens, and the retail trade was conducted in public places appropriated to the sale of each species of goods. No other covering was provided for the different wares, than a shade of osiers or rushes, which communicated to the city the appearance of a perpetual fair. Some nations, vain of their nobility, as the Thessalians, or proud of their great power, as the Spartans, deemed this mode of displaying what was intended for sale ignominious. But at Athens, those who dared to reproach the citizens with any thing of that nature, were liable to prosecution, and very severe punishments were enacted for such instances of insolence and pride. This evinces, that the Athenians were sensible of the great importance of a retail trade, as that without which, wholesale business cannot flourish.

We are told in an oration of Isocrates, of an operation, bearing some resemblance to our bills of exchange. A stranger who brought grain to

Athens, and who wished to purchase to a greater amount than the sale of his corn would enable him to pay, drew on a person living in some city on the Euxine, to which the Athenians were in the habit of trading. The Athenian merchant took this draft, but not till a banker in Athens had become responsible for its payment. In an oration of Demosthenes, also, glimpses appear of what by many has been deemed maritime insurance, or rather of that species of fraud, which is at present denominated barratry, practised to defraud the insurer. But there is no satisfactory proof, that the ancients were acquainted with marine insurance, though frauds similar to those practised at present, were perpetrated. According to Demosthenes, masters of vessels were in the habit of borrowing considerable sums, which they professed to invest in a cargo of value, but instead of such a cargo, they took on board sand and stones, and when out at sea, sunk the ship. As this money was advanced on the security either of the ship or cargo, the creditors were of course defrauded.

Most of the laws respecting commerce were of a prohibitory nature. Money could not be advanced or lent on any vessel, or cargo of any vessel, that did not return to Athens and discharge its cargo there. Various articles, such as were deemed of the first necessity, were expressly forbidden to be exported, such as timber for building, fir, cypress, plane, and other trees, which grew in the vicinity of the city—also the resin collected on Mount Parnes, and the wax of Mount Hymettus, which two articles, incorporated together, were used in caulking or daubing over their ships. The exportation of corn was strictly forbidden, and all corn imported, was prohibited to be sold any where but at Athens itself. By the laws of Solon, they were allowed to exchange their oil for foreign commodities. Money lent on vessels or their cargoes, bore high interest, sometimes 80 per cent.

In order to protect the character of merchants, a heavy fine, and in some cases imprisonment, was inflicted on whoever accused a merchant or trader of any crime which he could not prove. In order farther to protect commerce, and prevent it from suffering by litigation, all causes respecting it could be heard only during the period when vessels were in port, a period which usually lasted for six months, from April to September inclusive.

It has been remarked by Strabo, that wherever it was practicable to gather a multitude of Greeks together, either by superstitious rites or amusements, commerce was the infallible result. This fact is notorious. The method generally employed in Greece for establishing trade, was simply to promulgate reports of great miracles having been performed in some obscure place, until it became famous for pilgrimages, and then for fairs. In order to attract visitants for profit or pleasure, horse and chariot races were instituted, prizes awaited the victorious in the different kinds of strife. Musicians, poets, and painters contended for crowns, which were not unfrequently bestowed even on the courtesans of Corinth, in whom the utmost moral worthlessness was sometimes combined with the highest intellectual attainments. The gods, the priest, and the merchant, participated in the gains of a system artfully contrived for nursing superstition, and invigorating inland commerce. The Romans, that sagacious and discriminating race alone, of all the ancient nations, discerned

the illusion practised on the simple and admiring crowds collected to these places of resort—saw that commerce was the great end of all these institutions, and openly denominated the national games of the Greeks, the Commerce of Olympia. A Roman writer has maintained that, even at the sacred Elis itself, this species of traffic had an equally remote origin. Even Cicero himself, an admirer of every thing Grecian, asserts, that so far back as the days of Pythagoras, multitudes of people frequented such places for the express purpose of trading. Almost every year some sacred fair was held at Delphi, Nemæa, Delos, or the Corinthian Isthmus; but the emulation which reigned in such places degenerated finally into national jealousies; and the Eleans, who practised all the tricks of commerce, were ultimately excluded, and justly, from the Isthmian games. The Amphictyonic fairs were held twice a year, at Delphi in spring, and Thermopylæ in autumn. The Greeks assembled at these fairs could no more desist from commercial dealings, than children from play. The Amphictyonic fairs became famous for the sale of slaves, who were purchased wherever they could be found. Xenophon tells us of some slaves sold at Athens for thirty shillings a head, but those who had acquired a trade, or could be employed in the more laborious processes of manufacture, sold generally at £15 a head. In the days of John Chrysostom, female slaves were sold publicly at the Amphictyonic fairs for the purposes of incontinence. At the fairs of Thermopylæ, medicinal herbs and roots, particularly heliobore, were sold in large quantities. A proof that commerce was the end chiefly intended at these religious or political assemblages is, that during them all hostilities were suspended, and every person might go with his merchandise in safety to them, even through an enemy's country. The priests themselves, whether of Jupiter, Apollo, or Diana, encouraged these fairs, and often advanced large sums on interest to the merchants who frequented them.

The Isle of Delos, as being the reputed birth-place of Apollo and Diana, two of the chief Greek deities, was always a place of great resort from all parts of Greece, the Grecian Islands, and Asia Minor. The peace of this small spot, only seven miles in compass, remained always undisturbed, from its sacred character, being under the special protection of its native deities. The oracle of Apollo established here, was one of the most famous in the world, surpassing all others except that of Delphi. Hence the island was enriched by the vast crowds of people that came from all parts to ask counsel of the god, and from the immense number and richness of the presents dedicated to his godship. The holy fair, therefore, at this place, was one of the greatest in all Greece, and a grand mart for the Athenian speculators. Its trade chiefly consisted in the corn, wine, and other commodities of the neighbouring islands, the scarlet linen tunics of the Island of Amorgos, the rich purple stuffs of Cos, the alum of Melos; and the valuable copper of Delos itself, and the elegant vases manufactured from this copper, were the principal articles exported from Delos. In return, the merchants brought the produce and manufactures of their respective countries, so that Delos became, as it were, the storehouse of the treasures of different nations; and the scene during this combination of religious festivals and commercial dealings, was peculiarly gay and animated. The island-

ers were by an express law ordained to furnish water gratuitously to all the strangers who resorted to it, to which they added, gratuitously, cakes and other small eatables. The Athenians, to whom this island was of vast importance, in consequence of its grand fairs, encouraged all such strangers as were conversant in commerce, to settle in it, and carefully protected its neutrality and privileges. So sacred was the neutrality of this small island, that it was even respected by the Persians themselves. Datis, their commander, who had burned the temples of the gods in the other islands, would not even permit his fleet to anchor at Delos; and when informed that the Delians, terrified at his approach, had abandoned their native island, he sent a herald to the Isle of Tenos, whither they had fled, inviting them to return to their home, and resume possession of their land. On the return of the herald, he sent an offering of 300lbs. of frankincense, to be burned on the altar of the Delian god, and sailed off with his whole fleet without doing the smallest act of hostility to the island. No hostilities were ever practised here, from fixed opinion of the sanctity of the place. Even the Roman deputies sent to arrange the affairs of Syria and Egypt, when obliged to stop at Delos, found the galleys of Perses, king of Macedonia, and Eumenes, king of Pergamus, anchored in one and the same harbour, though these two princes were then at actual warfare with each other. The Romans, Macedonians, and Pergaminians walked and conversed together as friends, and visited the sacred temple in company, the sanctity of the place suspending all manner of hostility. No wonder, therefore, that commerce should flourish in a place, where the belief of its sanctity produced perpetual peace, and that merchants of all nations should take advantage of this conventional belief, to meet there and transact business, where they could enjoy perfect security. But it was after the destruction of Tyre and Corinth that Delos chiefly rose to commercial fame. These important events having given a new direction to Mediterranean commerce, a vast number of fugitives from these cities fled to this island, as to a sacred asylum, where they were taken under the protection of the Athenians, who were quite aware, that by rendering Delos the grand emporium of Mediterranean commerce, in place of Tyre and Corinth, they were in fact transferring it to themselves. It appears by an inscription found in the seventeenth century, that the Tyrians, after the subversion of their city by Alexander, had an associated company of merchants in this sanctuary of religion and hospitality, where the Athenians afterwards instituted religious festivals and games, similar to those of Olympia, in order to promote the commerce of the place.

The trade of Delos consisted chiefly in slaves; and here was the grand slave market of the Mediterranean, till the destruction of the Cilician pirates by Pompey, and the conclusion of the Mithridatic war. According to Strabo, in the time of Perses, king of Macedonia, above 10,000 slaves were sold here daily. The Athenians were great customers in this trade, for the free citizens of Athens were not sufficiently numerous, and though they had been so, were not by any means disposed to cultivate their lands, work their mines, and carry on their various trades and manufactures. During the most flourishing times of the republic, the citizens amounted only to 24,100, and the slaves to more than 400,000; so that this democra-

tic state, in proportion to its population and means, was the greatest slave-dealing and slave-holding state of antiquity. A great number of these slaves were Greeks, whom the fate of war had thrown into their hands, the rest were Macedonians and Syrians. It is a strange anomaly in the character of the Greek republics, and especially of the Athenians, who have been held as *deities*, compared to the rest of mankind, that while they talked perpetually of the blessings of freedom, and the ills of slavery, they made no scruple of making slaves of each other, and the rest of mankind. They were too proud to labour, and therefore slaves were necessary to perform what these haughty republicans deemed intolerable drudgery, and quite unbecoming the spirit of an Athenian citizen.

After the restoration of Corinth by Julius Cæsar, the commerce of Delos declined, notwithstanding the utmost efforts of the Athenians to maintain it. In a short time after that event, Delos was entirely abandoned, and fell into utter neglect and decay. The inhabitants of Mycone now possess this once celebrated spot, and pay but 10 crowns of land tax for an island, once the richest and the most sacred in the pagan world.

To enumerate all the inland Grecian fairs, for the purpose of trade, would be too tedious and uninteresting. It is to be remarked, that the want of large and navigable rivers in Greece, was the great cause of so many ambulatory merchants or pedlars in that country. It must be also observed, for the honour of Athens, that no monopolies were permitted by her laws. No privileges incompatible with political equality were allowed. Tradesmen, if ingenious, could obtain honours, but no exclusive monopolies.

Many colonies were founded by the Greeks, for the purposes of commerce, in distant parts, particularly on the Euxine Sea, and that in very early times. With these a constant connexion was maintained; and it was in consequence of this that Herodotus was enabled to give so elaborate an account of Western Scythia. Several colonies were founded at the mouths of the Tyras or Niester, the Borysthenes or Nieper, the Taurica Chersonesus, and the mouths of the Tanais or Don. By means of these, a communication was maintained with the inland parts of Scythia, as far north as the Hyperboreans, and thus a knowledge of the Scythian tribes and productions was obtained. Voyages to the Euxine, however, in such craft as the Greek vessels, were long and hazardous; and the small parent states were too weak to hold the colonies in subjection when they became powerful: on the other hand, these colonies, if weak, fell generally under the power of Scythian conquerors. Amphipolis, an Athenian colony at the mouth of the Strymon, on the confines of Macedonia and Thrace, was one of those which the Athenians were unable to hold, after Philip of Macedon was awakened to a sense of its importance. He took it by force of arms, and thus added the whole course and commerce of the Strymon to his kingdom. By this event the Athenians were deprived at once of the lucrative commerce of Thrace, of its timber for their fleets, besides a large tribute in the precious metals.

Next to Athens, Corinth enjoyed the greatest commerce of all the Grecian states. Its central position on the isthmus connecting the Peloponnesus with continental Greece, was extremely favourable for trade. It commanded by its port of Cenchræa, all the trade of the eastern part of

the Mediterranean Sea, and by the port of Lechæum, that of the Ionian Sea. Besides the commerce resulting from their natural situation, and the duties they were enabled to impose on transit goods from Greece to the Peloponnesus, or from the Saronic Gulf to the Ionian Sea, the Corinthians engaged extensively in various manufactures, as coverlets for beds, and bronze and terra cotta vases. But their most valuable manufacture was a species of metallic composition made of copper and a small quantity of gold and silver, which was extremely brilliant, and scarcely liable to rust and decay. Of this composition warlike armour was manufactured; and small cups, figures, vessels, &c. which were highly esteemed, not merely on account of the metal itself, but also still more on account of the tasteful foliage and other ornaments with which they were covered. Their earthen ware was ornamented in the same elegant and beautiful manner. All these were exported by the Corinthians in great quantities, and brought lucrative returns. Paper and sail-cloth from Egypt, ivory from Libya, leather from Cyrene, incense from Syria, dates from Phenicia, carpets from Carthage, corn, cheese, and honey from Sicily, apples and pears from Eubœa, filled the storehouses of Corinth. The commerce of Byzantium, of Samos, of Macedonia, &c. might also be described, together with that of the famous Rhodes, but our limits do not permit us to dwell on these.

The site and foundation of Alexandria form the most durable monument of the glory of the hero of Macedon. Its commerce was the most extensive and important in the ancient world, and but for the discovery of the passage to India, by the Cape of Good Hope, it would still have retained that fame which it possessed during the successive dynasties of the Ptolemies, the Cæsars, the successors of Constantine, and the Khalifs. It was built intentionally to succeed Tyre, which had been utterly destroyed by Alexander, in the commerce of the Red Sea and the Mediterranean. But his grand object in founding this city was to obtain possession of the commerce with India, by means of the Red Sea, and withdraw it from the Persian Gulf and the intermediate route between that gulf and the Mediterranean. In order more effectually to accomplish this object, travellers were sent by Ptolemy Philadelphus to explore the African coast of the Red Sea, whilst a fleet explored its western shores. As he failed in his design of establishing a canal between the Nile and Arinœe, he fixed on Myos Hormos as the port from which the navigation to India should commence. Another port, called Berenice, lower down the Red Sea than the former, was also established, and, consequently, ships sailing from it reached the ocean sooner and with less difficulty. Until the conquest of Egypt, however, by the Romans, the chief portion of the trade between Alexandria and India was carried on through Myos Hormos. In the time of the Ptolemies, the route was the following:—Vessels sailed up the Canopic branch of the Nile to Memphis, and thence up to Coptos, (the modern Kous) to Myos Hormos. From this port the vessels sailed for Africa or Arabia in the month of September, and for India in July. The tract being a complete sterile desert from Coptos to Myos Hormos, springs of water were sought out by Ptolemy's orders, wells were dug, and caravanserais were built.

It must be remarked, that in the days of the

Greek sovereigns of Egypt, and their successors the Romans, all the commerce of Egypt was managed by Greeks, and all the future discoveries in geography and hydrography were made by the same people. The native Egyptians, as before observed, had never cultivated a passion for commerce, and had become a dull and melancholy people after the extinction of their native princes, and the destruction of their religion and liberty. All the honours that were in the power of the Ptolemies to bestow were lavished on their Greek subjects, multitudes of whom settled in Egypt under the favour and protection of sovereigns of their own race, and every thing belonging to science, art, or religion, was wholly Greek. The natives had lost all their ancient science, and were become a poor, dispirited, abject race, debased by neglect and oppression, nothing being left them but the rites and ceremonies of their ancient superstitious system. Their merchants, sailors, captains, generals, admirals, navigators, geographers, astronomers, factors, agents, priests, musicians, were all Greeks. The care of the Alexandrian library and museum was intrusted to Greeks, and the professors of the schools were of the same nation. The Egyptians in fact ceased wholly to be a scientific people after the days of the Pharaohs, and it is to the Greeks wholly that we are indebted for any knowledge of the Indian and Arabian commerce.

Ptolemy Evergetes, in order to free the Red Sea from pirates, and clear the communication between Suez and Bah-al-Mandab, established garrisons all along both sides of that sea between these points, and planted colonies of Greeks and Egyptians to carry on the commerce, and protect the interests of his subjects. But the most extraordinary instance of his desire to facilitate the commerce of the Red Sea is to be found in his conquest of part at least of Abyssinia. The fact of this conquest rests on an inscription found at Aduli (the modern Masuah), the only proper entrance into Abyssinia, according to Bruce. It was extant in the time of Cosmas Indicopleustes, in 545 A. D. by whom it was seen and copied; and from which it appears that Ptolemy Evergetes passed the Tacazze, and penetrated into Gojam, where are the sources of the Abyssinian Nile. He made roads, opened up a communication between this country and Egypt, obliged the Arabians to pay tribute, and maintain the roads free from robbers, and the sea from pirates, subduing all the coast from Leuce Come to Sabæa.

Agatharchides, president of the Alexandrian library, who flourished 177 years before Christ, wrote a work expressly on the navigation and commerce of the Red Sea, and an account of Egypt and Ethiopia. For nigh 200 years after his day, all the information respecting these points given by the ancients is taken from Agatharchides. He is the first author who has given us the genuine features of the Abyssinian character, and mentions the gold mines wrought by the ancient kings of Egypt on the coast of the Red Sea; the process which they followed to procure and separate this metal, and the sufferings the miners underwent in their operations, are painted by him in very strong language. "The multitude of bones still found in these excavations," says he, "is incredible, of wretches crushed by the falling in of the earth, as must naturally happen in a loose and crumbling soil." He mentions also the tools of copper found in those gold mines, supposed to have been used by

the native Egyptians prior to the conquest of Egypt by the Persians. He gives an elaborate account of the wealth and commerce of the Sabæans and Gerrhæans, and says that these are the nations that have enriched the kingdom of Ptolemy, the centre of all the commerce between Europe and Asia, and who have furnished the most profitable agencies to the Phenicians. The straits of Bab-al-Mandab were passed by Timosthenes, the admiral of Ptolemy, who sailed round Cape Gardefan, the most eastern point of Africa, and down the African coast as far as Madagascar, lower down in fact than the Egyptians traded in the days of the Ptolemies, or even under the Romans.

In the time of Artemidorus, the commerce of Egypt had reached down the eastern coast of Africa, as far as the southern Horn; and at the straits of Bab-al-Mandab the cargo was transferred from ships to boats, which shows that the trade to India was still in its infancy. There are no proofs that a regular and direct trade was carried on with India through the Red Sea before the time of the Romans, though Huetius, Dr. Campbell in his edition of Harris, and Dr. Robertson, are of a contrary opinion. The Indian commerce was carried on indirectly with the Arabians, who supplied the Egyptian ships at the straits, or on the eastern coasts, with Indian commodities. On the Arabian side, the Egyptian commerce extended no farther than Sabæa or Yemen, and on the African, seldom farther than the straits. As long as Indian commodities could be obtained at Sabæa, the Egyptians contented themselves, and did not think of advancing farther. Such was the vast amount of the Egyptian commerce, that we are told by Strabo, the revenue of Alexandria in the worst of times was 12,500 talents, which, if valued by the Egyptian standard, is equivalent to £3,291,681. If such was the revenue under the last and most indolent of the Ptolemies, what must its revenue have been under the reigns of Ptolemy Philadelphus, or Ptolemy Evergetes? What Apian says of the treasure of the Ptolemies is still more extraordinary. The sum he mentions is 740,000 talents, which, if Eubœic, would amount to £191,166,666 sterling, according to Arbuthnot's table. This extraordinary amount would make one doubt the accuracy of his statement, did we not know that Apian was a native of Alexandria, and did he not, besides, tell us, that he extracted the account from the register of the city. When it is considered that this immense sum was accumulated by only two of the Ptolemies, Ptolemy Soter and Philadelphus, and that the latter maintained two great fleets, one in the Red Sea, and another in the Mediterranean, besides an army of 200,000 foot, 40,000 horse, 300 elephants, 2000 armed chariots, and an armory at Alexandria stocked with 300,000 complete suits of armour, and all other necessary weapons and implements of war, we may form some idea of the extent and fertility of Egypt, and her productive commerce, from which the whole of this must have been derived.

The Romans, as before remarked, in our account of agriculture, were by no means addicted to commerce, although by their conquest of the Volscian Ports, and subsequently of the Tuscan States, and Greek colonies in the south-east angle of Italy, they had it in their power, if they had been so disposed, to have enjoyed a very extensive share of the trade of the Mediterranean. Polybius indeed says, that before the first Punic war,

the Romans were totally ignorant even of the construction of a ship; and that when obliged to assist the Mamertines, they borrowed vessels from the Locrians and Tarentines, and that Sicily was the first country in which the Romans ever landed out of Italy. But this is not strictly true; for, as before observed, the Romans had three commercial treaties with the Carthaginians before that period, wherein Roman vessels are mentioned; and the Romans had some trade to Sardinia, Africa, and that part of Sicily possessed by the Carthaginians. The last treaty, occasioned by the invasion of Italy by Pyrrhus, stipulated that the Carthaginians should furnish them with ships if required either for trade or war. This shows a decline in the naval power of the Romans, and had not the Romans previously possessed some foreign commerce, they could have had no naval power at all. When the Antiates were conquered, the Romans became masters of their fleet, amongst which were six armed with beaks. We are told by Polybius himself, that the Roman fleet, appearing beyond the Gulf of Lacinium, which, by a previous commercial treaty with the Tarentines, the Romans were not to pass, the Tarentines took the alarm, and sunk four of the Roman ships. Valerius, the commander of this fleet, was one of the naval deceivers, officers who had been appointed 50 years before this event, and 50 before the first Punic war, expressly for the purpose of equipping, repairing, and maintaining the fleet. Now these facts show that the Romans had ships both for commerce and war, previous to their first war with the Carthaginians. By their conquest and destruction of Carthage, then the most commercial nation of antiquity, the commerce and naval power of the conquered state was transferred to the Romans. By the successive conquests of Sardinia, Corsica, and Sicily, of the African sea coast, of Spain, of Greece and its numerous islands, of Macedon, of Asia Minor, the countries on the Euxine, the tract between Mount Taurus and the Euphrates, and finally of Egypt, the collective commerce, whether inland or maritime, of all these countries, fell into the hands of the Romans. They became masters of the commerce of Gaul and Britain on the west, and of Arabia and India in the east; and the Eternal City, as it was proudly denominated by its inhabitants, became the great gulf in which was absorbed the wealth of the ancient world.

Yet with all the advantages of commerce, the Romans thought meanly of it, and abandoned it to their vassal subjects, or those amongst themselves who thought gain the chief object of human ambition. As conquerors, they were content to reap the benefits, without applying themselves to the pursuit of commerce. Their grand object was the extension of territory, and the enjoyment of wealth as the fruit of conquest. This was most decidedly the case in the time of the republic. The statue of Victory, which was erected in the port of Ostia, and the medals of the year of Rome 680, marked on the reverse with two ships and a victory, prove that at this period the Roman fleets then sailed from that port for the mere purpose of naval warfare. The prefects of the fleet were not employed to attend to commerce, or to the merchant ships, except so far as to protect them against pirates. Even Cicero himself, writing to his son on the subject of a profession, reprobates and condemns all retail trade as mean and sordid. Even the merchant, unless he deal very extensively, he views with contempt. If, however, he imports

from every quarter articles of great value, and in great abundance, and sells them in a fair and equitable manner, he admits he is not to be condemned, especially if after having made a fortune, he retires from business, and spends the rest of his life in agricultural pursuits. He is then allowed to deserve positive praise. Both he and Cato thought that retail trade could not be conducted without lying. "Is such a man," says Cicero, "who was a merchant and neighbour of Scipio, greater than Scipio because he is richer?" Pliny, though he expatiates in his *Natural History* in praise of agriculture and horticulture, of medicine, painting, and statuary, passes over commerce with simply observing, that it was invented by the Phenicians. In the *Periplus of the Erythraean Sea*, and in the works of Ptolemy and others, the names of many merchants and navigators occur, but they are all Greeks. Even after the conquest of Egypt, which gave a more commercial character to the Romans, no Roman was permitted to engage in the trade of that country. Cicero never mentions the merchant who exports; it is the importer only he speaks of. The commerce of the Romans in fact was confined solely to importation, and that in the most luxurious period of their empire, and consisted, with a few exceptions, in the expenditure of the immense revenues derived from their conquests, and the immense fortunes of individuals, in the necessities, comforts, and above all, the luxuries of the countries which they had conquered.

The principal article of importation to Rome was corn from Sicily, Egypt, and Africa, as also from Thrace. Till the time of Julius Cæsar, the foreign corn for the supply of Rome was imported into Puteoli, a city of Campania, between Baie and Naples, about 70 miles distant from the capital. As this was very inconvenient, Cæsar formed a plan of making an artificial harbour at the mouth of the Tiber at Ostia. He did not live, however, to put it in execution, and it was subsequently accomplished by Claudius Cæsar about 88 years after, when a dreadful famine raged at Rome. A spacious basin was dug in the main land, and the entrance to this was formed and protected by artificial moles, which advanced far into the sea. Before the mouth of this harbour was a small islet, on which a lighthouse was built after the model of the Pharos at Alexandria. The ships employed in the corn trade were the largest of any employed in the Mediterranean, especially those between Rome and Alexandria. Tiberius, the successor of Augustus, mightily encouraged this trade by a bounty of fourpence on every modius of wheat imported; and Claudius, during the time of the famine, made the bounty so great, as at all events, and in every instance, to remunerate the importers. He used all his efforts to persuade the merchants to import grain even in winter, taking upon himself all the losses which might be incurred from risking their vessels and cargoes, at a time of the year, when it was the invariable practice of the ancients to lay up their ships.

The other articles imported into Rome were the following:—From the northern parts of Italy, almost sufficient for the consumption of the capital, woollen clothes, wool, and marble. To convey this last, vessels of a peculiar form and construction were used. Steel, crystal, ice, and cheese, also came from the same quarter. From Liguria, Rome received timber for building, of a very large size, ship timber, fine and

beautiful wood for tables, hides, honey, and coarse wool. Etruria also supplied timber, cheese, wine, and stone, which last was shipped at the ports of Pisa and Luna. Pitch and tar came from Brutium; oil and wine from the Sabines. Such were the principal imports from the different parts of Italy. From Corsica, timber for ship building, especially box-wood; from Sardinia, a little corn and cattle; from Sicily, besides corn, wine, honey, salt, saffron, cheese, cattle, pigeons, corals, and a species of emerald, with Hyblaean honey. From Malta, cloth, but whether cotton or linen is uncertain, was imported, and honey from Attica. Lacedæmon supplied green marble, and dye of the purple shellfish. From the Grecian Islands, Paræan and Naxian marbles, the earthen ware of Samos, the vermilion of Lemnos, and other articles of luxury, were imported. Thrace supplied salted tunnies, the produce of the Euxine Sea, besides corn. The finest sheep wool was brought from Colchia, with hemp, flax, pitch, and fine linens. These goods, as well as goods brought overland from India, were shipped from the port of Phasis. The best cheese used at Rome came from Bithynia. A stone similar to alabaster was brought from Phrygia, with excellent wool from Laodicea, some of which was of a deep black colour. The wines used at Rome were principally Italian. The best foreign wines were brought from Rhodes, Chios, and Ionia. Woollen goods, dyed with Tyrian purple, were imported from Miletus, in Caria. From Cyprus were imported copper, rosin, sweet oil, and an inferior species of diamond. Cedar, gums, balsam, and alabaster, were supplied by Syria, Phenicia, and Palestine. From Sidon were imported glass, embroidery, purple dye, as well as several kinds of fish from Tyre. The Indian goods, that came by way of Palmyra, were shipped for Rome at the ports of Syria. Egypt, besides corn, sent flax, fine linen, ointments, marble, alabaster, salt, alum, gums, paper, cotton goods, some of which, as well as the linens, seem to have been stained or printed, glass ware, &c. The honey lotus, or rhamnus, the lotus nymphæa, or colocassa of Egypt, considered as a luxury by the Egyptians, and used as bread, were sometimes carried to Rome. The latter was also used occasionally as provision for mariners. Africa Propria, besides corn, sent to Rome, honey, drugs, marble, ostriches, ostrich eggs and feathers, elephants, and lions. These last were for the amphitheatre. From Mauritania, timber of a fine grain and excellent quality, the exact nature of which is not known. This wood was sold very high, and was used principally for large tables. From Spain were exported, as the surplus produce of the southern provinces, corn, wine, honey, oil, wax, pitch, scarlet dye, vermilion, salt, salted provisions, wool, besides gold and silver bullion, either in the shape of revenue, or the rental of opulent individuals.

From the eastern parts of Spain, were sent cordage made of spartum, a species of broom, silver, earthen ware, linen, steel, &c. Some wine was exported from the Balearic Isles. The commerce with Spain employed as many vessels as were used in the whole of the African trade, especially in the reigns of Augustus and Tiberius. Even in the time of Julius Cæsar, Spain had acquired great wealth, principally by her commerce with the Imperial City. The ports from which the articles above specified were exported, were Cadiz, New Carthage, and a port at the mouth of the Bætis, where, for

the security of the shipping, a lighthouse had been erected. Cadiz was then the rival of Alexandria in commercial importance, and so great was the resort of merchants to it, that many of them, unable to build houses on the land for want of room, lived entirely on the water.

From Gaul, Rome received gold, silver, iron, and other articles, as part of tribute; also linens, corn, cheese, and salted pork. Immense flocks of geese were driven by land from Gaul to Rome. The chief ports on the Mediterranean side of Gaul, which sent goods to Rome, were Narbonne, Marseilles, and Arles, on the Rhone; and on the ocean, Bourdeaux, and the ports of the Veneti, in Brittany. A number of Italian and Roman merchants resided in the south of Gaul, who were principally engaged in the wine trade, and bartered wine for slaves.

From Britain, Rome received tin, lead, cattle, hides, ornaments of bone, dogs and bears, as we are informed by Strabo. The tin and lead came from the Cassiterides. These were not the Scilly Islands alone, but comprehended the peninsula of Cornwall. The Cassiterides, strictly speaking, were the two promontories of Cornwall—Cape Cornwall, and the Lizard Point. Thither the tin was transported to Vectis, or the Isle of Wight, and there shipped for the continent of Gaul; from whence it was conveyed overland to Marseilles, near the mouth of the Rhone, and exported thence to Rome. It is strange that Strabo should specify gold and silver bullion as native productions of Britain, when Cæsar, who should have known better, mentions neither; and Cicero, who in his epistles, writing to a friend, states, on the authority of his brother who was there, that Britain produced none of these metals. British dogs were celebrated for their strength and ferocity, even at Rome, before Cæsar's expedition thither. They were of different species, and were employed for hunting both by the Gauls and the Romans. The bears were for the amphitheatre, but their exportation was not frequent till after the time of Augustus. Bridle ornaments, chains, amber, and glass ware, are enumerated by Strabo as articles exported from Britain; but according to others, they were imported into it. Oysters and agates were exported from Britain to Rome. Chalk and marble were exported to Gaul, for manuring the marshy lands bordering on the Rhine, the effect of which, according to Pliny, continued 80 years. The principal articles imported into Britain, were copper and brass, utensils made of these, earthen ware, salt, &c. The traffic with Gaul was carried on partly by means of barter, and partly by pieces of brass and iron, unshaped, unstamped, and rated by weight. The duties paid in Gaul, on the imports and exports of Britain, formed, according to Strabo, the only tribute exacted from the latter country in his time.

Cambden, the English antiquary, in his British antiquities, tells us, that such was the fertility of Britain, that 800 vessels laden with corn were freighted annually to the continent. But this assertion rests on very doubtful authority, and cannot be credited if applied to Britain, even very long after the Roman conquest. It is true that in one instance, in the time of Julian, when Gaul was under the pressure of a famine, caused by the calamities of a German invasion, 600 large barks, made of the wood of the Ardennes forest, were despatched to Britain for grain, to which they made several voyages; and returning thence laden with their

cargoes, sailed up the mouth of the Rhine, and distributed grain to the several cities and fortresses up the banks of that stream. Zosimus has augmented the number of vessels despatched by Julian to 800, and it is from him in all probability that Cambden has drawn the assertion above mentioned. If the ships be computed at 70 tons burden each, the quantity imported from Britain would equal 126,000 quarters; and as they made several voyages, the quantity would be much more; and if Britain then could support so large an exportation, it must have been under Roman government, in a state of high cultivation.¹ But amber was the principal article of import from Britain by the Romans.

As for a long time Germany was inhabited by fierce wandering tribes, few articles of commerce could possibly be brought thence to Rome. Some indirect trade was however carried on with the traders that roamed or dwelt near the shores of the North Sea and the Baltic. The feathers of the German geese were preferred to all others at Rome, and the amber of the Baltic formed a most important article of traffic. It bore an immense price with the luxurious Romans, and was valued far above gold or precious stones. By the ancients it was believed to be the gum of a tree, and was thence denominated *succinum*. In the poetical fables of Ovid it was feigned to be the tears of the Heliades, deploring the fate of their brother, the unhappy Phaeton. As it becomes electric by friction, it also obtained the name of *helektron*, and *electrum* from the Greeks and Romans, and has thus imparted its name to the modern philosophy and doctrines of electricity. The Phœnicians were the first who penetrated into the Baltic, and discovered this substance, according to Herodotus, who says that these early navigators brought tin from the Cassiterides, and amber from the Eridanus, which empties itself into the North Sea, which, in the opinion of his learned translator and annotator, Larcher, could not possibly be any other than the Rho-danus, a tributary stream of the Vistula, joining it near Dantick, as amber is at present found in large quantities along its banks. In the days of Pliny and Tacitus, the Estians, who inhabited the maritime coast of Poland, now called Prussia, carried the amber as far west as the banks of the Rhine. From thence it received the appellation of *glas*, signifying in Gothic, a glassy and shining substance, exactly analogous to the Greek *helektron*. From thence it came to the Veneti, who forwarded it to Rome. Afterwards, in consequence of the great demand and consequent high price of this article, the Romans sent agents expressly to purchase it in the north of Germany; and their land journeys in search of it first made them acquainted with the shores of the Baltic. The Estii gathered it and sold it to the Roman factors, and were astonished at the price they obtained for it. In Nero's time, an embassy headed by Julianus, a Roman knight, was sent by him to the king of the Estians, to purchase it on the spot. The embassy commenced its route at Carnuntum, on the Danube, near the site of the modern Vienna, and crossing the Hercynian forest, arrived at the Vistula, and embarking on the highest navigable point of that river, sailed down the stream, till they arrived at the Amber Islands at its mouth, now the delta of the Vis-

1 See Gibbon, vol. ii. p. 427, and Note.

tula, and met with a kind reception from the Estian monarch and his subjects. They bought and brought away about 13,000lbs. of amber, amongst which was one piece which weighed 13lbs. The whole of this quantity served for the decoration of one day, on which Nero gave an entertainment of gladiators. We learn from Cassiodorus, that Theodoric, king of the Goths in Italy, received a large present of it from the Estians, who were desirous of his friendship, which he promised in return by a letter of thanks to them for the valuable gift. They informed the ambassadors of the Gothic monarch of their ignorance of the origin of the amber, but that it was thrown on their coast by the sea, a fact which exactly agrees with modern observation.

We now come to those articles with which Asia supplied Rome, which were principally those of luxury. Amongst these were the murrhine vases, which, according to Pliny, came from Carmania in Parthia, (the modern Kerman) from thence to Egypt, and thence to Rome. Of what substance these vases, so called, were made, has caused much perplexity and unsatisfactory discussion among the learned. The prevailing opinion is, that they were made of the flint of lime or Derbyshire spar. It is probable that, in the first instance, the murrhine vases came from India, as they are expressly mentioned by the author of the *Periplus of the Erythrean Sea*, as brought down from the capital of Guzarat to the port of Barygaza. These vases or cups were first seen at Rome, in the triumphal procession of Pompey, when he returned from Iberia and Colchia. They sold at enormous prices, and were employed at the tables of the great and wealthy only, as cups for drinking. The price in general of one which held three pints, sold for about £14,000, and Nero gave about £59,000 for another. So highly were they prized, that in the conquest of Egypt, Augustus was content to select for his own share, out of all the spoils of Alexandria, a single murrhine cup. Precious stones and pearls were imported from Babylon, and the Persian and Arabian Gulfs. Babylon also furnished Rome with what were denominated triclinaria, but whether these were quilts, carpets, or curtains, is not satisfactorily ascertained. Perhaps all the three may be included under that term. Incense of a very superior quality was imported from Persia. The various and valuable commodities of Arabia, which supplied the luxury and profusion of Rome, reaped that capital from Alexandria. As it is impossible to enumerate the whole of them in our prescribed limits, it is sufficient to mention the most important and valuable. As great demand and high profits necessarily draw a great number of merchants to any particular trade, it is not at all wonderful that the commerce in Oriental luxuries was so eagerly followed at Rome, then the richest and by far the most populous city of the world. Pliny has devoted two entire books, the 12th and 13th of his *Natural History*, to the enumeration and description of the spices, aromatics, ointments, and perfumes used by his luxurious countrymen. He informs us, in a querulous tone, that the Roman world was exhausted by a drain of more than £800,000 annually for the purchase of luxuries, equally expensive and superfluous. This sum was the first cost of the articles at the Indian market. In another place he reduces the sum to £447,000. He estimates the profit made at Rome by the importation and sale of Oriental luxuries, at 100 per cent. Arabia furnished dia-

monds, but these were of a small size, and other gems and pearls.

Though the ancients were but imperfectly acquainted with the art of cutting diamonds, still that natural production held the highest rank among gems. The Indian diamonds came probably from Sumbhuipoor in Orissa. Next in value was the emerald. Nero used one as an eye glass for short sight. But though very large and splendid diamonds brought very high prices at Rome, yet it is questionable if they held the same rank in value as pearls. We have many instances of the exorbitant price of pearls, but none, so far as is known, of an equal price being paid for diamonds. Pliny, it is true, in his last book of *Natural History*, says, that the diamond holds the highest value amongst gems. But in his 9th book, he assigns the highest to the pearl. These two passages are impossible to be reconciled. Yet he says in his 19th book, that asbestos or the incombustible cloth, equals in price the choicest pearls, where he is speaking of the exorbitant price of that species of cloth, which seems to imply that among gems the pearl brought the best price. It is clear that they were in higher repute than diamonds, for they were eagerly purchased by persons of every rank, and worn on every part of dress; and such is the difference both in size and value among pearls, that whilst such as were large and of superior lustre adorned the great and the wealthy, such as were smaller and of inferior lustre, gratified the vanity of those in more humble circumstances. Servilia, the mother of the famous Brutus, received from Julius Cæsar a pearl, as a present, which cost the donor about £50,000. The famous pearl ear-rings of Cleopatra were in value £161,457. Precious stones, it is true, as well as pearls, were found not only in India, but in many other regions, and all were ransacked to gratify the vanity of the luxurious and ostentatious Romans. Pliny has devoted a whole book, the last of those which compose his great work, to the enumeration and arrangement of precious stones; and the care with which he has described and arranged them, would surprise the most skilful lapidary or jeweller of modern times, and shows the high request in which diamonds and pearls were held by the ancient Romans.

Spices and aromatics, were articles of high value at Rome. From the mode of religious worship in the pagan world, from the incredible number of their deities, and of the temples consecrated to them, the consumption of frankincense and other aromatics, which were used in every sacred function, was enormous. But it was particularly in burning the bodies of their dead, that the consumption of these was great. In this, vanity was as much gratified as piety. It was the custom of such as could afford it, not only to cover the body, but also the funeral pile on which it was laid, with the most costly spices. At the funeral of Sylla, 210 camel loads of spices were strewn on the funeral pile. More cinnamon and cassia were burnt by Nero's orders at the funeral of Popæa, than the countries which produced it could supply in a year. "We consume in heaps," says the austere Pliny, "these precious substances with the carcasses of the dead. We offer them to the gods only in grains." These spices and aromatics before the conquest of Egypt were brought from Arabia, the Arabian

traders, however, obtained the greatest and best portion of them from India. In the reign of Augustus, one whole street was occupied, according to Horace,¹ by those who dealt in these spices and aromatics. Frankincense was also brought, according to Pliny, from Gaza in Palestine. The caravans who brought it to Gaza, were 62 days on their journey, the expense of which, with impositions, duties, &c., raised the value of every camel load to £22, and a pound of the best sort at Rome, brought ten shillings. Alexandria, however, was the grand emporium of this traffic, and every precaution was taken by the Alexandrian merchants, to guard against adulteration and fraud. Cinnamon, another article of Arabian exportation, was also in high repute at Rome, and sold extravagantly high. Vespasian was the first who dedicated crowns of cinnamon enclosed in gold filagree in the capitol, and the Temple of Concord; and Livia dedicated the root in the Palatine Temple of Augustus. The plant itself, was brought to the emperor Marcus Aurelius, in a case seven feet long, and exhibited at Rome, as a great rarity. This plant however, we are told came from Barbarike in India. Antiochus Epiphanes carried a few boxes of it in a triumphal procession, and Seleucus Callinicus presented two mine of it and two of cassia to the king of the Milesians, as a gift. In the enumeration of gifts made by that monarch, some notion of the comparative rarity and value of the different kinds of aromatics among the ancients may be obtained. Of frankincense he gave ten talents; of myrrh, one talent; of cassia, two pounds; of cinnamon, two pounds; and of costus, one pound. The two first were productions of Arabia, the rest of India. The former, consequently, could be procured with much less difficulty and expense than the latter. Spikenard, another Indian commodity, also reached Rome through Arabia, by means of the port of Alexandria. Pliny says, that both the leaves and spices were of great value, and that the odour was the most esteemed in the composition of all ointments. The price of spikenard at Rome was 100 denarii or £3:6:8 per lb. The markets from which the Arabian traders brought it, were Pattala, on the Indus, Ozene, and a mart near or on the Ganges.

Sugar also, but of an inferior quality to that of India, was imported from Arabia, through Alexandria, to Rome. The Indian sugar, which is expressly mentioned by Pliny, as better and higher priced, was brought to Rome, but by what route is not exactly known; probably by means of the Arabian merchants, who traded to the east coast of Africa, where they either found it, or imported it from India. In the Periplus of the Erythrean Sea, and also in the rescript of the Roman emperors, relative to the articles imported into Egypt from the East, which was promulgated by Marcus Aurelius, and his son Commodus, in A. D. 176, it is denominated cane honey, otherwise called sugar (sacchar). Sacchar is the Arabic name, made saccharon by the Greeks, and saccharum by the Romans. So early, therefore, as the Periplus (A. D. 73,) the name of sacchar was known to the Romans, and applied by them to sugar. The word does not occur in any earlier author, unless Dioscorides lived before that period, which is uncer-

tain. The nature, however, and proper appellation of sugar, must have been imperfectly known at the time of the rescript above mentioned, otherwise the explanatory phrase *cane honey*, would not have been used. The first information respecting sugar was brought to Europe by Nearchus, the admiral of Alexander. In a passage quoted from his journal by Strabo, it is described as honey made from reeds, there being no bees in that part of India. It is mentioned by Arrian, who has preserved the journal of Nearchus, as a kind of gummy substance expressed from Indian canes, and used by the natives as a delicious beverage. In a fragment of Theophrastus, preserved by Photius, among different kinds of honey mentioned by him, honey found in reeds is one. The first mention made of any preparation in order to thicken the juice of the reed, occurs in Eratosthenus, as quoted by Strabo, where he describes roots of large reeds found in India, which were sweet to the taste both when raw and boiled. It is described by Dioscorides and Pliny as used chiefly, if not wholly, for medical purposes. Galen who lived about A. D. 131, classes it with medicine that may be easily procured. It must, of course, have become pretty common and cheap at Rome. It is probable, that though the Arabians cultivated this plant, and supplied Rome with sugar from it, they derived their knowledge of it from India, for the Arabic appellation *shuker*, adopted by the Greeks and Romans, is formed of the two middle syllables of the Shanscrit word *ich-shucasa*.

Ethiopia supplied Rome with cinnamon of an inferior kind, marble, gems, ivory, rhinoceros' horns, and tortoise shell. This last article was in great demand, and brought a high price, being used to ornament furniture, as beds, tables, doors, &c., not only in Italy, but in Greece and Egypt. The finest kind was sold for its weight in silver. It was imported not only from Ethiopia, but also from the east coast of Africa, and reached Rome even from Malabar and Malacca. The opian stone mentioned in the Periplus, and the obsidian stone described by Pliny² as a kind of black glass, are stated by both, to have come from Ethiopia, and were probably the same species of stone. Both were capable of being highly polished, and on this account the emperor Domitian used opian stone to face a portico. Pliny says, that obsidian was used to line rooms as reflecting mirrors, and distinguishes it from a spurious kind of a red colour but not transparent. The purple dye extracted from the shellfish, was imported into Rome from Gætulia, a region on the south of Mauritania.

The next branch of Roman commerce, or that of the western world, was with India. I do not mean the indirect commerce with India, by means of the Arabians, as before mentioned, but that which was carried on directly with the Indians in their own ports, and that which was conducted overland by caravans. Although in the time of the Ptolemies a few ships had dared to pass the straits of Bab-al-Mandab, and even Timosthenes the Egyptian admiral had turned Cape Gardafan, and sailed down the eastern coast of Africa, as far as Cerne, supposed to be Madagascar, yet the progress of Indian commerce in this direction was extremely

1 Epist. l. lib. xi.

2 Lib. xxxvi. c. 96.

slow, and it was not till the time of Hippalus a Greek, and commander of a ship, engaged in the Indian commerce, about 80 years after Egypt became a Roman province, that a direct intercourse by sea was attempted with success. By attending to the regular shifting of the monsoons, which blow one part of the year from the east, and during the other from the west, he thought it would be much better to take advantage of the western monsoon, and sail at once across the ocean, from the mouth of the straits to the Indian coast, than continue the slow and dangerous method of creeping along the coast. This discovery of Hippalus formed a new era in the history of navigation and commerce, and the discovery was held to be of such importance, that in order to perpetuate the memory of the discoverer, the name of Hippalus was given to the wind which enabled him to perform the voyage. This new mode of communication is particularly described by the diligent and laborious Pliny, in the following words:—"From Alexandria to Jullopolis," says he, "is two miles. There the cargo destined for India is embarked on the Nile, and is carried to Coptos, which is distant 303 miles, and the voyage is usually accomplished in 12 days. From Coptos goods are conveyed by land carriage to Berenice, on the Arabian Gulf. The distance between these cities is 258 miles. On account of the heat, the caravan goes only during the night, and the journey is finished on the twelfth day. From Berenice, ships take their departure about midsummer, and in 30 days reach Ocelis (Gella) at the mouth of the Arabian Gulf, or Cane (Cape Fartack) on the coast of Arabia Felix. Thence they sail in 40 days to Musiris, the first emporium in India. They begin their voyage homeward early in the Egyptian month Thibi, which answers to our December. They sail with a north-east wind, and when they enter the Arabian Gulf, meet with a wind, south or south-west, and thus complete the voyage in less than a year." From this detail we may see how imperfect ancient navigation was, even in its most improved state. The voyage from Berenice to Ocelis could not have taken thirty days, had they held a straight course, instead of servilely following the windings of the coast. From Ocelis to Musiris, in the modern state of navigation, would not occupy more than 15 days for an European ship, the distance being 1,750 marine miles in a direct line. This Musiris was Merjee, on the Malabar Coast, not far to the south of Goa. It is stated by Pliny to have been an incommo- dious port, being so shallow, that it was necessary to discharge or take in the cargo in small boats at a distance from the emporium; besides, there was danger from the pirates at Nitria. Another port more commodious and better stored with merchandise, was named Barace, or Becare, in the country of the Nicenidians; and as the pepper of Cottonara was brought thither in small boats, Barace was probably within or near the country of Canara, which produces the best pepper in India at present.

The order of the places in going south is the following: Nitria, (Newtya) Tyndis, Musiris, Becare, Nelynda, Cottiana, Comaria in Ptolemy. The Periplus of the Erythrean Sea enumerates in the same order Tyndis, Musiris, and Barace, allowing 500 stadia between each.

Now, these correspond to Goa, Merjee, and Barcelore. Nelynda is Nellsuram, and said to be in the kingdom of Pandion, the modern Madura, and Comaria is clearly Cape Comorin or Comry. These were the ports visited by the Roman traders from Berenice.

But the best and fullest account of the Indian commerce is given by the author of the Periplus, composed A. D. 73, in the reign of Nero. He describes the whole western coast of India, from the Indus to Taprobane or Ceylon. The eastern coast is not so minutely nor so accurately traced as the western, though it is plain that there are allusions to Cavery, Masulipatam, Calingapatam, Coromandel, and other places, districts of the eastern coast. The countries beyond the Ganges, the Golden Chersonese, and the tracts towards China, are very obscurely noticed, though the information given respecting the trade carried on in these parts is much more minute and accurate. His description of the coast of India is, on the whole, surprisingly consonant to truth. According to him, it extends from north to south as far as Colchos, (Travancore) and then bends to the east, and afterwards to the north, and then again a little to the east, as far as the Ganges. He is the first author in whom can be clearly traced the name of the great southern division of India. The name he gives it is *Dachanabades*, *dachan* signifying south, and *abad* a city. Now, the modern term Decan is applied to all the tract of India south of the rivers Nerbudda and Soane, or to the south of Baroche, the limit assigned by him. The particulars he mentions of the bay of Cutch, of Cambay, of Baroche, and the Ghauts, are so many proofs of his accuracy, respecting those parts of India which he visited in person. His great work comprises two parts, the first comprehending the coast of the Red Sea and Africa, from Myos Hormos on the former, to the Rhapta on the latter; and the second part describes the whole coast of Arabia, beginning at Myos Hormos, as before, both as lying on the Red Sea and on the ocean, and then stretching from the Gulf of Persia to Guzarat, describing the Malabar Coast to Ceylon. From Myos Hormos to Adull, on the western coast, and Moosa, on the eastern coast, he is not circumstantial in his narrative.

Adull, or Masuah, the port of communication with Axuma, was subject to the Abyssinian monarch, who held the whole coast from it to Berenice. Its exports were chiefly ivory, brought from the interior on both sides of the Abyssinian Nile, rhinoceros' horns, and tortoise shells. The imports were very numerous, forming an assortment as specific as a modern invoice. The principal articles were cloth of Egyptian manufacture, unmilld, for the Barbarian market, or the Berbers', robes manufactured at Arsinoe, (Suez) cloths dyed in imitation of Tyrian purple, linens, fringed mantles, glass or crystal, murrhine cups, aurichalcum or mixed metal for trinkets and coin, brass vessels for cooking, iron for weapons and other purposes, knives, daggers, hatchets, &c.; brass bowls, wine, oil, gold and silver plate, camp cloaks and coverlets. The other articles imported into Adull must have come through Arabia from India, as Indian iron, Indian cottons, coverlets and shawls made of cotton, cotton cloth dyed the colour of the mallow flower, and a few muslins.

Beyond the Straits of Bab-al-Mandab, four marts are successively mentioned on the Arabian side,—Abalitis, Malao, Mundus, and Mosullon.

From Abalitis, myrrh of the finest quality was exported to Arabia, on the opposite side; and this being purchased by the Greek merchants in Sabæa, was deemed by them a native production, whereas, according to the Periplus, it came from Africa. From Malao the exports were myrrh, frankincense, cassia, inferior cinnamon, gum, and a few slaves. From Mundus the only article of export was a fragrant gum, produced in the vicinity. At Mosullon were imported, as at the three marts above specified, flint glass, and glass vessels, from Egypt, unripe grapes from Diospolis, which were used to make the rob of grapes, unmilled cloths for the Barbaric market, corn, wine, and tin, which last must have come from Britain or Spain, tunics, cloths manufactured at Arsinoe, milled and dyed; iron also, and a small quantity of specie, were imported into Malao in addition to those specified at Abalitis. Mosullon was the chief market for cinnamon, the quantity of which here was so great, that larger vessels were used for conveying it than were seen in the other ports of Africa. Whether this cinnamon was an Arabian or African production is uncertain. The Periplus says that it was of inferior quality, whereas Dioscorides affirms that the Mosulletic cinnamon was of prime quality; and it is therefore supposed that it was of Indian origin. The other exports were gums, drugs, tortoise-shell, incense, frankincense, brought from a distance, ivory, and a small quantity of myrrh. The abundance of aromatic articles procured on this coast, induced the Greeks to give the name of Aromatic to the whole coast, and particularly to the town and promontory at its eastern extremity, or Cape Gardefan. Beyond this cape were the marts of Opone and Rhapta, the articles of commerce much the same as at those before mentioned. Rhapta was so called by the Greeks, because the native ships were raised from a bottom composed of a single piece of wood, and the sails were sewed to it instead of being nailed. In order to preserve the sewing, the whole exterior was covered over with gum. When the Portuguese first visited this coast, under De Gama, they found ships of exactly the same materials and construction. At Rhapta the customs were farmed by the merchants of Moosa, though the place was subject to one of the princes of Yemen.

On the Arabian side the Romans had a garrison and custom house at Leuke-come, where all goods, whether imported or exported, paid a duty of 25 per cent. Thirty miles from the Straits of Bab-al-Mandab was Moosa, the regular mart of Arabia Felix, or Yemen. The imports into this place were chiefly purple cloths of different kinds and prices, manufactured Arabian garments with sleeves, plain and mixed, saffron, a species of aromatic medical rush, muslins, cloaks, quilts, but only a few plain and made according to the fashion of the country, sashes of various colours, some corn and wine, and specie to pay for the balance of trade. In order to ingratiate the prince of the district, horses, mules, gold plate, richly embossed silver plate, splendid robes, and brass wares were imported expressly as presents to him, and he was styled the friend of the Roman people. Embassies were frequently sent him from Rome. The exports from Moosa were myrrh of the best quality, gum, and very pure and white alabaster, of which boxes were made. Beyond the straits 120 miles was the village of Arabia Felix, (the modern Aden) and 200 miles farther east, Cane, a port of great trade to Barygaza,

Pattala, Oman, and Persia, as well as to the African ports beyond the straits. The goods imported were principally from Egypt, as wheat, wine, cloaths for the Arabian market, common, plain, and mixed; brass, tin, Mediterranean coral, which was in great repute in India, so that the great demand for it prevented the Gauls in the south of France from adorning their swords, &c. with it, according to Pliny, as they were wont to do; storax, plate, money, horses, statues, and cloth. The exports were principally frankincense and aloes. At Syagros or Cape Fartack, was a garrison for the protection of the place, which was the depot of all the incense collected in these parts. The first mart beyond Syagros was Moscha. The Sacchaltic incense collected here for exportation was so abundant, that it lay in heaps, with no other protection than that which was derived from the gods, for whose sacrifices it was intended. No person could procure a cargo of this without the permission of the king; and the vessels were so thoroughly observed and searched, that not a grain of it could be clandestinely exported. The intercourse between Moscha and Cane was regular, and the former was besides frequented by such ships from India as arrived too late in the season, where they continued during the unfavourable monsoon, exchanging muslins, corn, and oil, for frankincense. The pearl fishery in the Persian Gulf, and Apologos, a celebrated mart at the mouth of the Euphrates, are mentioned in the Periplus. The pearl fishery is described as extending from Mocandom, (Musendom) the extreme south point of the Persian Gulf, to Bahrain. Apologos is the modern Obollah on the canal reaching from the Euphrates to Bassora. At Omana in Gedrosia were imported from Barygaza in India, brass, sandal wood, timber, (perhaps teak) horn, ebony, and frankincense from Cane. This is the first port, the trade of which included ebony and sandal wood. The exports to Arabia and Barygaza were purple cloth for the natives, wine, a large quantity of dates, gold, slaves, and pearls of an inferior water.

There were two places on the Indus frequented for the purposes of commerce, namely, Barbarike, near the mouth of the stream, and Minagara, higher up, whose sovereign possessed the whole coast of Barygaza. As it was of great consequence to secure the favour and protection of this potentate, very valuable presents were made him, as musical instruments, handsome virgins for the harem, wine of the very best quality, plain cloth, but of the finest sort, and perfumes. The exports were costus, bdellium, a yellow dye, spikenard, emeralds, sapphires, cottons, silk thread, indigo, or, perhaps, the Indicum of Pliny, which was probably Indian ink, skins, with the epithet *serica* prefixed to them, but of what kind is not known. The wines imported were of three kinds; namely, from Laodicea, or Syrian wine (still celebrated,) Italian and Arabian wines. The produce of the district of Barygaza was oil of Sesamum, rice, corn, ghee or butter, and cotton. The prince of this place was so anxious to render it the only mart, that he would not permit ships to enter any of his other harbours. If they attempted it they were boarded and carried back to Barygaza. Here were collected all the produce and manufactures of this part of India, some of which were brought down the Nerbudda, others were conveyed across the mountains by

caravans. The merchandise of Bengal, and even of the Seres, was collected here, besides the produce of Africa and southern India. Business was conducted here in a masterly manner; for such was the despatch used in managing it, that a cargo could be entirely landed and sold, and a new cargo obtained and shipped in the space of three days. From Ozene to the north-east of Barygaza, were brought to the latter for exportation, onyxes, porcelain, fine muslins, muslins dyed of a melon colour, and cotton cloths in great quantities. From the Punjab were brought for exportation, spikenard of different kinds, bdellium, ivory, murrhine cups, myrrh, pepper, &c. The imports were wines of Laodicea, Italy, and Arabia, brass, tin, lead, coral, topazes, cloth of different kinds, sashes, storax, sweet lotus, white glass, stibium, cinnamon, and a small quantity of perfumes. A considerable quantity of grain was also imported. Twenty days' journey to the south of Barygaza was Plithana, and ten days' journey east of this last was Tagara, both ports of great consequence, and the latter the capital of the country. From these were brought down through difficult roads, several articles to Barygaza, as onyxes from Plithana, and cottons and muslins from Tagara.

Tagara, as Wilford has shown, is identical with Deogire, a place of great antiquity, and famous through all India, on account of the wonderful excavations of Elora. Arice, of which it was the capital, contained the greatest part of the Soubahdri of Aurungabad, and the southern part of the Concan, for the northern part belonged to the rajah of Larikhe, called Sandanes in the Periplus, including Damaun, Callian, the Isles of Salsette and Bombay. The phrase *anodiai megistai* in the Periplus, or the *Maximi Ascensus* over which the goods were brought, means the Bala-Gauts, and is the first time in which these mountains were heard of in Europe. The goods were brought down from these high mountains to the Concan or low-country, and thence to Baroche. Plithana is the modern Pultana on the southern bank of the Godavery, 217 miles to the south of Baroche. The onyxes and several other precious stones mentioned in the Periplus, are still found in its vicinity, being washed down by torrents from the hills, as related by Pliny. In the description of the coast south of Barygaza, the pirate coast follows first, and then that of Canara, called Limurike, and then Pandion, or the Malabar Coast. In Limurike was the port of Musiris, or Merjee. The imports here were nearly the same as at Barygaza, but the exports were more numerous and valuable, being principally pearls in great abundance, and of extraordinary beauty, a variety of silk stuffs, rich perfumes, tortoise shell, different kinds of gems, especially diamonds, pepper in large quantities, and of the best kind. The port of Nelycynda, the limit of the personal knowledge of the author of the Periplus, was a place of very great trade, principally in betel nut and pepper, pearls, ivory, silks, spikenard, precious stones, and tortoise shells. The imports were chiefly specie, topazes, cloth, stibium, coral, glass, brass, tin, lead, wine, grain, &c. The ports south of Nelycynda, were frequented chiefly by the country ships, which carried on a lucrative commerce between them and the ports in the north of India. The exports of Taprobane or Ceylon, are mentioned as consisting chiefly of pearls, gems, tortoise shells, and muslins, but cinnamon

is not once named, a decisive proof that the author had never visited that island.

Of the countries beyond Cape Comorin, the knowledge communicated in the Periplus, is merely from report, but respecting commerce is surprisingly accurate. The Gangetic muslins are praised as the first of the sort. Gangetic spikenard is also noticed. The other articles of traffic in the ports on the Ganges, were betel and pearls. Thina is mentioned as a city in the interior of a country immediately to the north, at a certain point where the sea terminates, from which, silk wool and manufactured silks were brought by land through Bactria, to Barygaza, or else down the Ganges, and thence by sea, to Limurike. The means of approach to Thina are represented as very difficult. Some merchants, however, came to a great mart held annually near it. The Seseae, who from the description seem to have been Tartars, came thither with their wives and children. They are described as squat, thick set, with their face broad, and their nose greatly depressed. The articles they brought for trade were of great bulk and enveloped in mats made of rushes, which in their outward appearance resembled the early leaves of the vine. Their place of assembly was between their own borders and those of Thina, and here, spreading out their mats, they held a fair for several days, and at the conclusion of it, returned to their own country in the interior. Upon their retreat, the Thina, who had remained on the watch, repaired to the spot and collected the mats which the strangers left behind at their departure. From these, they took out the haulm, and drawing out the fibres spread the leaves double, and made them into balls, and then passed the fibres through them. Of these balls there were three sorts: in this form they take the name of Malabathrum.

Thus far the author of the Periplus. The personal geographical knowledge which he possessed of India, may be described as the arch of a circle, extending from Minnagar on the Indus, through Ozene, (Ougein to Tagara) Dioghir on the Godavery, of which Barygaza (Baroche) is the centre. This arch contains three degrees of a great circle, but small as this knowledge is, it is daylight compared to what preceded it, respecting the geography and commerce of India.

From Nelycynda fleets sailed to Chrysa, Chersonesus, or as is supposed Malacca, between which and China there was then a commercial intercourse, but at a later period this commerce settled in Ceylon or Taprobane. Here the silk of China was brought, and thence to Nelycynda, thence to the Red Sea and the Persian Gulf, and thence by different ways to Rome. Fine linens called Sindones, from the river Sinda or Indus, near which they were manufactured, and blue and red dyes, were imported from India. The dye of the deep blue colour was called indicum, and bore the highest estimation among the Romans. It is the same as our modern indigo. It is described by Pliny, but he was both ignorant of the plant itself, and the mode of preparing it for use. From the colour of indigo in the form in which it was imported, it is denominated by some authors *atramentum indium*, and *indicum nigrum*,¹ and is mentioned under the latter appellation in the Periplus.

1 Salm. Plin. Exercit. p. 190.

The gum lacca, used in dyeing a red colour, was also known to the ancients by the same name which it now bears.¹ This valuable substance is the production of a very minute insect.

Silk is the last article that remains to be considered in the inventory of Roman oriental imports. It is impossible precisely to fix the date when silk was first known in Europe. It is believed, however, that the first knowledge of that article was brought into Europe, through the conquests of Alexander the Great.

Two routes by land are specified, by which silk was brought from China to Rome, one by Ptolemy, and another by the author of the *Periplus*. The first is taken from Marinus of Tyre, who flourished about 60 years before Ptolemy. This route commenced at the Bay of Issus in Cilicia. It then crossed Mesopotamia from the Euphrates to the Tigris, near Hierapolis in Syria. It then passed through part of Assyria and Media to Ecbatana and the Caspian Pylæ. From this, through Parthia to Hecatompylos. From this to Hyrcania, then to Antiochia Margiana, and thence into Bactria. From Bactria, a mountainous tract was to be crossed, and the country of the Sacæ, (Sakita of Eridis) to the Lithinos Pyrgos, or Turris Lapidea, the Stone Castle. Near this place, was the station of those merchants who traded directly with the Seres. The exact position of this place is still a desideratum in geography. From it they passed the Beloor Tag, and entered the region of Casia, or Cashgar. They passed thence through the country of the Ithaguri to the capital of the Seres. From the Stone Castle to that point was a journey of seven months, comprehending a space of 36,200 stadia, to which, if 26,250 stades be added, as the distance from the pass of the Euphrates, the whole distance will be 62,450 stadia from the Euphrates to the capital of the Seres, according to Marinus, and which Ptolemy makes equal to 105¼ degrees of longitude, in direct distance. If the distance be taken from Tashkunt on the Jaxartes, which is supposed to be the Stone Castle of Ptolemy, the word Tashkunt signifying such in Turkish, to Peking in China, it will amount to nigh 52 degrees of longitude, or about 2,800 miles in direct distance. If other five months be allowed for the distance between the head of the Issic Gulf and Tashkunt, then the time occupied by a caravan of merchants, in going thence to Peking, will be a whole year, so that two whole years must have been occupied in going and returning with a cargo of silk to the head of the Mediterranean, whence the cargo was shipped for Rome. An order, therefore, for an importation of silk from China, given at Rome, could not be executed in less than two years and a half. It is no matter of wonder, therefore, that silk should have brought its weight in gold, at Rome, a pound of it there being equal in value to £44 sterling money. It is even astonishing that any commodity, however precious, could bear the expense of such a long and tedious land carriage, liable as it was also, to interruption from the Scythian robbers, or from the frequent wars between the Romans and the Parthians, and then with the Persians, their successors.

We are informed by the author of the *Periplus*, that the silk came from the capital of the

Seres, called by him Thina, through Bactria to Barygaza, and by the Ganges to Limurike or Canara. According to this first route, they must not only have traversed the whole way from the wall of China to Bactria, but also have crossed the Hindoo Kho, and descended the river of Caubul to its junction with the Indus, and thence sailed down that stream to the mouth, and then coasted the Gulfs of Cutch and Cambay, to the port of Barygaza. This is such an amazing deviation from the route mentioned above from Marinus, that it is impossible to conceive otherwise, than that its adoption was the result of necessity, induced by the prohibition of the route through the Parthian dominions, during a state of war between the Parthians and the Romans; or rather perhaps, the information of the author of the *Periplus* was incorrect, or through geographical ignorance he misunderstood his informants. It is well known that a caravan route exists between Cashmere and Cashgar by way of Ladauk and Yarkund, of 44 days' journey. Now it is more likely that the silk caravans from China, instead of crossing the Beloor Tag, or Western Imaus, and going the circuitous route of Tashkunt, Samarcand and Bochara, to the Indus, would turn to the left of Cashgar, and cross the Moos Tag, or northern Imaus by the pass of Karrakorum, and thence down the north-west branch of the Indus to Ladauk, and thence to Cashmere, whence they would descend to the Indus by the Hydaspes, or else descend the Indus at once from Ladauk to Naulibe. This is a much more probable account of the route, than that given by the author of the *Periplus*. The other route by the Ganges I cannot well understand, unless it were by crossing the whole of Tibet, from Sining in Shensi, to Nepal, and thence to the Ganges, and down that stream to the Bay of Bengal, where the silk was shipped for the coast of Canara, north of Malabar. But such a route as that through Tibet, the most rugged country in nature, and where the stupendous chains of the northern, central, and southern Heemalleh were to be crossed, could not be often attempted. The danger of the Scythian desert could be nothing compared to the difficulties of such a mountainous route. The only European who ever passed that unfrequented road, was happy to applaud his own diligence, that in nine months after his departure from Peking, he reached the mouth of the Indus.

The other way in which the Romans were supplied with Chinese productions was by means of the Persian merchants, and the Sogdian caravans. These caravans belonged to the adventurous natives of Samarcand and Bokara, in modern times denominated the Bukhars, who traversed the whole road to Sining in Shensi, a journey of three months at least, and purchased the raw material and manufactured silks, from the Chinese merchants at the fair of that place. They sold them to the Persian merchants on the frontier, who, in their turn brought them to the great fair of Nisibis in Mesopotamia, or to the Armenian fairs, on their way to Europe, by the Mediterranean or the Euxine.

The Romans were very anxious to keep up a good understanding with the Seres, for the sake of commerce, and for this purpose negotiated a treaty with one of their sovereigns, as we are informed by the Chinese annals, though no

1 *Saljn. Plin. Exercit. p. 180.*

notice of such an event is made by any Greek or Roman author. In these annals we are told that Antoun (Marcus Antoninus) king of the people of the Western Ocean, sent an embassy to the emperor Oun-ti, who then reigned over China, and that the intention of the embassy was to render the commercial intercourse with China more secure. What success attended this embassy we are not told, nor whether it did facilitate the intercourse between the two empires. It must be remarked, that at this time the Chinese were in possession of all Tartary, as far west as the Beloor Tag, or in other words of all Scythia extra Imaum, so that the moment the Romans or Sogdians crossed the Beloor and entered Cashgar, they were under Chinese protection and surveillance.

The consumption of silk must have greatly increased within 100 years after the death of Aurelian, since Ammianus Marcellinus tells us that in his time (A. D. 380) silk which had formerly been confined to the rich and great, was within the purchase of the common people. Constantinople was founded half a century before he wrote, and silk naturally found its way thither in greater abundance than it had done to Rome the former capital. From this time till the reign of Justinian in the sixth century, we have no particular mention made of the silk trade and manufacture of the Roman empire. At this period the Persians having overcome the aversion of their ancestors to maritime commerce, had established a flourishing and lucrative commerce with India and China. All the principal ports of India were visited by Persian merchants, and in most of the Christian churches established in the peninsula, divine service was performed by Nestorian priests, ordained by a Persian metropolitan. By sea and land the monopoly of silk and Indian commodities was completely in the Persian possession. This was the more humiliating, as silk had now become an article of very general and indispensable use. The Romans, therefore, were wholly dependant on the pleasure of their political enemies, for the supply of that article. The manufacturers of Tyre and Berytus, who had all along supplied the empire with silk, could no longer command a sufficient supply, even at an extravagant price. Besides, when the manufactured goods entered the Roman dominions, they were subjected to a duty of 10 per cent. Under these circumstances, Justinian very foolishly ordained that silk wool should be sold at the reduced price of eight gold pieces, or £3: 12 per pound. The effects of this arbitrary edict were soon felt, and such as might have been expected. No more silk was imported, and Justinian was compelled to have recourse to other measures. Instead, however, of restoring the commerce of Egypt, which before this had fallen into utter decay, and sending vessels directly to the Indian markets, as those of Ceylon, Malacca, or even of China, which Roman vessels might have reached by a coasting navigation, and there obtained silk, either raw or manufactured, or both, he solicited the Abyssinian monarch, who had lately conquered Yemen or Arabia Felix, to import into Adull or Masuah, the raw silk, that he might procure it thence and manufacture it within his own dominions. But the Abyssinian monarch wisely declined the offer, as the vicinity of the Persians to the Indian markets for silk, and their vicinity by land to Serica, (for the dominions of the Great Nooshervan then reached

to the Jaxartes and the western Imaus,) enabled them to purchase it at a cheaper rate than the Abyssinians could procure it. Justinian then applied to the Arabians for the same purpose, who also declined, for the same reasons as the Abyssinians. The wealthy and luxurious Romans, therefore, to whom this elegant material had become an indispensable requisite of dress, would have been in a great measure deprived of it, had not two Nestorian monks in the year 551, brought some eggs of the silk worm from China, and introduced the manufacture of silk into Europe.

What were the duties on commerce under the Roman emperors it is impossible to determine. No custom-house duties seem to have been imposed till the reign of Augustus. We are certain, however, that a vast revenue was drawn from the port of Alexandria, at least equal to what it had been under the reign of the Ptolemies. In the reign of Augustus, and that of his immediate successors, duties were imposed on every kind of merchandise, which was imported into Rome, varying from an eighth to a fortieth part of the value of the article. These duties were so ordered that it was the Roman purchaser, and not the provincial merchant, who paid the tax. Whether the duties were greater on articles of luxury than on those of necessity, we have not the means of knowing; but the probability is, that they were. The fullest and most minute list of articles of luxury, on which duties were imposed, is to be found in the rescript of Marcus Antoninus and his son Commodus, respecting the goods imported into Egypt from Arabia and India. In the preamble to this rescript it is declared, that no blame shall attach to the collectors of the customs while the goods are in transit, for not informing the merchant; but if the merchant wishes to enter them, the officer is not to lead him into error. The chief and most valuable articles on which duties were to be levied were cinnamon, myrrh, pepper, ginger, aromatics, and precious stones. In the estimate of the value of emeralds, the Scythian held the first rank, the Bactrian the second, and the Ethiopian the third.

Pertinax, who succeeded Commodus, was a favourite of commerce. His father was a manufacturer of charcoal, and he himself for some time pursued that branch of business, then both an extensive and lucrative trade. Sensible from his own experience of the value of commerce, he abolished all the taxes laid by Commodus on the ports, harbours, and public roads, and gave up all his privileges as emperor, which in any point interfered with the freedom of trade, or were injurious to the merchant. Alexander Severus granted peculiar privileges and immunities to foreign merchants who settled at Rome, lowered the duties on merchandise, and divided all who followed trade, either on a large or a small scale, into different companies, each of which seem to have had the privilege of choosing their own governor, and over each of whom persons were appointed conversant in each particular branch of business, whose duty it was to settle all disputes that might arise.

By Constantine and his successors a capitation tax, resembling our income assessment, was laid upon all the merchants and traders of every species in the empire. Their mercantile property, like that of the landholders and agriculturists, was valued by officers, appointed for the purpose of determining the sum at which each should be assessed. As this tax upon commer-

cial industry was collected every fourth year, it was called the lustral contribution. This was a most unpopular tax, and pressed severely on the commercial interest of the empire.

Till the reign of Justinian, the straits of the Bosphorus and the Hellespont had been open to the freedom of commerce, nothing being prohibited but the exportation of arms to the barbarians. But the avarice or profusion of that emperor, stationed at each of the gates of Constantinople a prætor, whose duty it was to levy a toll on all goods brought into the city; while on the other hand, heavy duties were exacted on all vessels and merchandise that entered the harbour. Another evil that cramped the Roman commerce in his reign was the system of monopolies. As soon as the exclusive sale of silk, says Procopius, was usurped by the imperial treasurer, a whole people, the manufacturers of Tyre and Berytus, were reduced to extreme misery, and either perished with hunger, or fled to the hostile dominions of Persia.

This is all that we can glean from the scanty notices of antiquity respecting the fiscal regulations of commerce under the successors of Cæsar and Constantine. It may be here remarked, that the same complaints made in modern times respecting the Indian and Chinese commerce were repeatedly made then, that while it enriched the natives of these countries, it impoverished the Roman world, by the continual drain of specie and bullion, especially silver. The Roman senate complained that in the purchase of female ornaments, the wealth of the state was irrecoverably given away to hostile

and distant nations. The annual loss was computed by Pliny at £800,000 sterling. He condemns the excessive rage for oriental aromatics and spices, and declares, that as for pepper, he could never see the use of it in any shape; yet after all the complaints against the exportation of silver in Pliny's time, the proportion of silver to gold rose very considerably. The proportion of the one to the other in the time of Pliny, was from 1 to 10, and 12½; but in the time of Constantine it was 1 to 14 two-fifths, or in other words, a pound of gold, which was then worth from 10 to 12½ pounds of silver, was worth at the time above specified nigh fifteen pounds of silver. Silver therefore was evidently more plenty and more common in the time of Constantine, than in the time of Augustus or Vespasian, which completely disproves the assertion of Pliny and others, that the Indian commerce drained the western world of its silver. It is, besides, plain from the number and kind of articles enumerated in the *Periplus* of the Erythrean Sea, that the exports were by no means wholly in specie, but in articles of barter, which the reader will see by consulting that book, or from what we have extracted from it and other authorities. It was the idea then, as it is still with many at present, that gold and silver alone constitute wealth. These may be viewed either as commodities, or as media by which commerce is conducted. In the former way, they are merely exchangeable with other commodities in proportion to their plenty or scarceness; in the other, they are no more than the standard by which commodities are valued.

OF THE LIBERAL ARTS AND SCIENCES.

INTRODUCTION.

We come now to treat of the *arts* which are called *liberal*, in opposition to such as are *mechanical*, because the first are considered as the most noble, and more immediately dependant upon the understanding. These arts are principally architecture, sculpture, painting, and music.

The arts as well as sciences have had their happy ages, in which they have appeared with greater splendour, and cast a stronger light: but, as the historian observes, this light and splendour was soon obscured, and the duration of these times of perfection of no great continuance. They triumphed longer in Greece than in any other part of the world.¹ To begin the reign of the liberal arts no higher than the time of Pericles, and make it endure only to the death of Alexander's first successors, (and each of these eras may be extended both at their beginning and end,) the space will be at least two hundred years, during which appeared a multitude of persons illustrious for excelling in all the arts.

It is not to be doubted but rewards, honours, and emulation, contributed very much in forming these great men. What ardour must the laudable custom have excited, which prevailed in many cities of Greece, of exhibiting in the shows such as succeeded best in the arts, of instituting public disputes between them, and of distributing prizes to the victors in the sight, and with the applauses of a whole people! Greece, as we shall soon see, thought herself

obliged to render as much honour to the celebrated Polygnatus, as she could have paid to Lycurgus and Solon; to prepare magnificent entries for him into the cities where he had finished some paintings; and to appoint, by a decree of the Amphictyons, that he should be maintained at the public expense in all the places to which he should go. What honours have not the greatest princes paid in all ages to such as distinguished themselves by the arts! We have seen Alexander the Great, and Demetrius Poliorcetes, forget their rank to familiarize themselves with two illustrious painters, and come where they worked, to pay homage in some manner to the rare talents and superior merit of those extraordinary persons. One of the greatest emperors, Charles V., that reigned in the West since Charlemagne, shewed the value he set upon painting when he made Titian Count Palatine, and honoured him with the golden key, and all the orders of knighthood.² Francis I. king of France, his illustrious rival as well in the actions of peace as those of war, outdid him much, when he said, to the lords of his court, of Leonardo di Vinci, then expiring in his arms: "You are in the wrong to wonder at the honour I pay this great painter: I can make a great many such lords as you every day, but only God can make such a man as he I now lose."³ Princes who speak and act in this manner, do themselves at least as much honour as those whose merit they extol and respect. It is true, the arts, by the esteem kings profess for them, acquire a dignity and splendour that render them more illustrious and

¹ Hoc idem evenisse grammaticis plasticis, pictoribus, sculptoribus, quibusque temporum notis insisteret reperiet, et eminentia cujusque; operis accuratissimis temporum claustris circumdata. *Patero*, l. 1.

² Cav. Ridolphi in the life of Titian.

³ Vassari in the life of Leonardo di Vinci.

exalted: but the arts, in their turn, reflect a like lustre upon kings, and ennoble them also in some measure, in immortalizing their names and actions by works transmitted to the latest posterity.¹

Paterculus, whom I have already cited when noticing the short duration of arts when they have attained their perfection, makes another very true remark, confirmed not only by the experience of the remote, but latter ages; which is, that great men of every class, in arts, sciences, policy, and war, are generally cotemporaries.²

If we recall the times when Apelles, Praxiteles, Lysippus, and other excellent artists flourished in Greece, we find her greatest poets, orators, and philosophers, were then alive. Socrates, Plato, Aristotle, Demosthenes, Isocrates, Thucydides, Xenophon, Æschylus, Euripides, Sophocles, Aristophanes, Menander, and many

others, lived all of them almost in the same age. What men, what generals, had Greece at the same time? Had ever the world any so consummate? The Augustan age had the same fate in every respect. In that of Louis XIV., what a number of great men lived of every kind, whose names, actions, and works, will celebrate that glorious reign for ever? It seems as if there were certain periods of time, in which I know not what spirit of perfection universally diffuses itself in the same country throughout all professions, without its being possible to assign how or why it should happen so. We may say, however, that all arts and talents are allied in some manner to each other. The taste of perfection is the same in whatever depends upon genius. If cultivation be wanting, an infinity of talents lie buried. When true taste awakes, those talents deriving mutual aid from each other, shine out in a peculiar manner. The misfortune is, that this perfection itself, when arrived at its supreme degree, is the forerunner of the decline of arts and sciences, which are never nearer their ruin, than when they appear the most remote from it: such are the instability and variation of all human things!

1 De pictura, arte quondam nobili, tunc cum expectetur a regibus populisque, et illos nobilitante, quos dignata esset posteris tradere. *Plin.* l. xxxv. c. 1.

2 Quis abunde mirari potest, quod eminentissima cujusque professionis ingenia in eandem formam et in idem arcuati temporis congruant spatium. *Paterc.* l. i. c. 16.

• Sic Lipsius legit, pro congruens.

OF ARCHITECTURE.

ARTICLE I.

Of Architecture in general.

SECT. I.

*Rise, progress, and perfection of Architecture.*³

It is not to be doubted but the care of building houses immediately succeeded that of cultivating lands, and that architecture is not of a much

latter date than agriculture. Hence Theodoretus calls the latter the eldest sister of architecture.⁴ The excessive heats of summer, the severity of winter, the inconvenience of rain, and the violence of wind, soon instructed mankind to seek for shelter, and provide themselves retreats to defend them against the inclemencies of the weather. At first, these were only little huts, built very rudely with the branches of trees, and very indifferently covered.⁵ In the

3 Respecting the origin and early progress of architecture, it is in vain to expect any distinct historical evidence, and unnecessary to speculate on the probable means resorted to by the primitive inhabitants of the world to defend themselves from the inclemency of the weather or the ferocity of wild beasts. † The art of building, being indispensable for the comfort and protection of man, must have been practised, in some measure,

† Vitruvius (lib. i. c. 1.) dwells at some length on the rude endeavours of savages in the construction of their primeval huts.

4 Theodor. orat. 4. de Provid. p. 358.

5 Vitru. l. i. c. 1.

in every country and in all ages; and, while the degree of elegance or ingenuity displayed in it by any particular nation would generally correspond with the wealth, power, and civilization of the people, it is evident that the mode of construction adopted, must have been determined by the nature of the materials of which they were in possession. Thus, the ponderous buildings and extensive caverns of the Egyptians indicate a land abounding in

time of Vitruvius, they showed at Athens, as curious remains of antiquity, the roofs of the Areopagus, made of clay; and at Rome, in the temple of the capitol, the cottage of Romulus,

thatched with straw. There were afterwards buildings of wood, which suggested the idea of columns and architraves. Those columns took their model from the trees which were used at

stone; the architecture of Greece, in its most essential parts, indicate the early appropriation, to the construction of edifices, of those woods with which that country was covered; the lofty and slender buildings of Hindostan indicate the primitive employment of reeds and bamboo; and in the edifices of the Chinese may be traced the moveable tents of their Tartarian forefathers.

In Egypt, India, and Persia, architecture first rose to considerable perfection; but it is still a matter of controversy, which of these countries has the strongest claim to priority. Two eminent authors,* after much investigation, infer, from the great and united efforts necessary to accomplish the architectural works still found in Hindostan, that the eastern quarter of the world has a preferable claim to Egypt; and they also conceive that Iran, or Persia, furnished to both the other countries the rudiments of knowledge. Others assert, that Hindostan is wholly indebted to Egypt—that a connexion with it was early established through the means of colonies, who sought refuge in India from the tyranny of the shepherd kings—and that, after the expedition of Cambyzes, the temples and tombs in Persia were constructed by Egyptian workmen. To this question of priority—rendered peculiarly difficult by the alternate influence which each country exercised over the other as their respective physical powers increased or diminished, and by the common interests which linked them together in the earlier stages of their existence—no satisfactory solution can be expected; and, therefore, without entering at all into the controversy, we shall content ourselves with following the unanimous voice of antiquity, in giving Egypt the first place in ancient architecture, to which it has as fair a claim, at all events, as any other nation.

The history of Egypt—of its ancient cities, palaces, and temples—is involved in impenetrable obscurity. From the seat of empire having been first established at Thebes, and next at Memphis, we are led to conclude that the original progress of colonization was made in the same direction; but the periods or manner of this progress, as far as regards the cities of Upper Egypt, are to us totally unknown. Thebes, we learn from the magnificent description of Homer, had risen to great importance previous to the Trojan war, or about 1800 years B. C.; Memphis is said to have been built eight generations after Thebes; and Cambyzes invaded Egypt 525 B. C.; so that for a period of 700 years this country is known to have abounded in wealth and population; and when it is considered, that during this time the command of the wealth was in the hands of an artful priesthood, and unceasingly applied to the construction of religious and royal edifices, we shall be able to account for the extent and magnificence of those works, which, notwithstanding the devastations of Cambyzes, of the Romans, and the natural waste of 3000 years, still remain the most striking monuments of human industry in the ancient world.

No accounts of the manner or periods of construction of the ancient edifices of Egypt, India, and Persia, having reached modern times, we are only enabled to give some description of the general forms and constituent parts of those which still exist, leaving the reader, from these data, and the circumstances connected with their situation or history, to draw his own conclusions.

* Sir William Jones and Dr. Robertson.

The ancient structures of Upper Egypt are of three distinct forms. First, The simple pyramid. Second, Apartments enclosed by sculptured walls with flat roofs, supported by rows of columns, and connected by open porticos. And, Third, Caverns, grottos, or tombs. With regard to the priority or succession of these several modes, we are without any historical evidence. Some are of opinion, that caverns first furnished dwellings, and also places of worship to the Egyptians, and that to these succeeded the simple pyramid; whilst others contend, that the colonnades were raised in imitation of the groves of trees, in which were the earliest places of worship. The simplicity of the pyramids would induce us to assign them a very early era; but as they are situated in the neighbourhood of Memphis, the second capital of Egypt, it is difficult to reconcile this circumstance with their priority to Thebes, the first capital. If caverns were the first habitations of the Egyptians, they must have been what are now reckoned natural caves; for the excavations appropriated for tombs are arranged with great skill, and indicate a considerable progress both in architecture and sculpture.

The Egyptians, of all nations, seem to have built and planned with an exclusive regard to permanence. A yearning after immortality was the *primum mobile* of all their undertakings. They preferred the idea of an unconscious existence in the form of hideous mummies to that of utter dissolution; and expected, or wished, after the expiration of the great cycle, to find all that they had left exactly as they left it—the same bodies and the same buildings.

The ruins of Thebes, which have frequently been visited by modern travellers, testify an extent and magnificence of architectural design to which there are not many parallels in past or present times. Karnac and Luxor are situated on the eastern side of Thebes, distant from each other about two miles. Karnac, the greatest edifice in Egypt, was dedicated to Priapus. The mole is 140 paces in length, and 95 in thickness; it leads to a court 110 paces in length, and the same in breadth. Two ranges of six columns conduct to a portico composed of 136 columns. The two middle ranges of these are 11 feet diameter, the others are seven feet; the length of this vestibule is 78 paces, the breadth 25: it leads into a court where there are 4 obelisks, and 12 colossal figures. Two other courts conduct to what is supposed the apartments of the kings. Adjacent to the great palace are many other extensive buildings, connected with it by avenues of sphinxes, lions, and rams, some of the avenues extending towards Luxor. The entrance to Luxor is composed of two obelisks, which at present rise 70 feet above the surface of the ground, and are understood to be about 30 below it; two colossal statues of black granite, each 38 feet high; and two great moles or mases of building of an oblong plan and tapering sides, 55 feet high, and covered with hieroglyphics. So closely are these large masses crowded together, that from the front of the moles to that of the obelisks the distance is only 14 paces. On the western side of Thebes is the site of the Memnonium, and the immense statue of red granite, 64 feet in height, thrown down by Cambyzes. The space between

* Of the labyrinth of Egypt, described by Herodotus, P. Mela, Strabo, and Pliny, no remains have been found, nor has its site been satisfactorily ascertained.

first to support the roof, and the architrave is only the large beam, as its name implies, that was laid between the columns and the roof.

The workmen, in consequence of their appli-

cation to building, became every day more industrious, and expert. Instead of those slight huts with which they contented themselves at first, they began to erect walls of stone and

Memnonium and Medinet Abou, which is about a mile and a quarter, is covered with fragments of colossus. Here appears to have been what Diodorus Siculus called the tomb of Oeymandes. The palace of Medinet Abou has still preserved a covered passage, 55 paces long and 65 broad, formed by four rows of columns, placed on the four sides of the court. The columns are 45 feet high, and 7 feet in diameter. The tombs of the kings are situated about 3½ miles from the river, in a narrow valley between the mountains of Libya. In the time of Strabo 17 of these tombs were found, and, including a grotto near the Memnonium, there is still the same number remaining.

Karnac, Luxor, and Memnonium, from the nature of the sculptures and distribution of the apartments, are supposed to have been royal edifices. At all other places, the ancient buildings are considered as having been appropriated to religious purposes. But, from the accounts handed down respecting the nature of the authority exercised by the Egyptian priesthood, it is probable that even at Thebes the palace and temple were united.

The temple of Tentyra, situated upon the Libyan shore of the Nile, is considered to be the most perfectly executed of the Egyptian temples. The façade or front of the building is 72 paces in breadth, 145 in depth, and 70 feet in height. A doorway, of elegant form and workmanship, conducts into a portico 60 paces by 30, supported by 24 columns, 7 feet diameter, and 55 in height. The hall, which succeeds the portico, is 24 paces square. It is supported by six columns, whose capitals are each composed of four figures of the head of Isis with the ears of a cat; the second hall is 24 paces by 10; the third is of the same dimensions. The apartment which succeeds the last hall is 24 paces by 6, and is insulated by a space on each side of it; this was probably the sanctuary. In the before-mentioned second hall, there are two staircases, which lead to the terrace or roof. Behind this great temple is a small one, about 17 paces square.

In the temple at Apollinopolis or Edifou, which, next to that at Thebes, is the largest edifice in Upper Egypt, the moles at the entrance are nearly in contact; the doorway is higher than in any other temple; it opens into a vast court, surrounded by columns, in form of a peristyle. The portico is formed of six columns in front, and three deep; some of the capitals have three rows of leaves approaching to the decorations of the Corinthian order. The interior distribution is similar to Tentyra. This edifice is 500 feet in length, and is constructed of fine sandstone.

The entrance to Latopolis consists of 24 elegant columns, whose capitals vary as to decoration, but are each of masterly execution. At Hermopolis, there still exists a magnificent portico, consisting of 15 columns, in two rows, each eight feet diameter. The length of this portico is 120 feet, and the height 60 feet.

There appears to have been a considerable difference in the form of the ground plans of the Egyptian edifices. The buildings of Karnac, Luxor, Philæ, and Hermopolis, have large moles at their entrances, and the doorways are between the moles. Magnitude of parts, in these instances, seems to have been chiefly had in view; but at Tentyra and Latopolis, the entrance presents no great objects, but leads immediately into a beautiful portico, characterised by richness and perfection of workmanship. In some of these edifices the sanctuary is placed at the

extremity from the entrance; and in others, it has courts and halls on each side of it. Whether these differences in arrangement arose from a gradual change of style, or whether each form was peculiar to the deity or purpose to which it was appropriated, it is now impossible to determine; but the perfection of the workmanship at Tentyra, Latopolis, and Apollinopolis, is incontrovertible evidence of an improved state of the arts.

In the outlines and decoration of their columns, also, the Egyptians appear to have made considerable alterations. The simplest of their columns consist of representations of bundles of reeds bound together near the top with a cord, which is wound several times round them, having a square stone laid on their top, forming what is now known by the term abacus, and the part between this stone and the cord-binding, apparently crushed down by the incumbent weight, so as to bulge out a little beyond the surface of the part which is firmly bound. The first change from this simple mode seems to have been to introduce mere bindings or belts in various parts of the shaft; and in the divisions between them, to represent alternately reeds and hieroglyphics. The bulged part near the top was also decorated by reeds and hieroglyphics, and sometimes by triangular flutings. Afterwards, this upper part was formed into elegant vase shapes, decorated with the stalks, leaves, buds, and blossoms of the lotus; and occasionally leaves of the palm, vine, papyrus, and date, were introduced. At the Memnonium, in place of columns, human figures are introduced, as they were afterwards by the Greeks.

In the general façades or fronts of buildings, the shapes remained nearly the same; the extremities of the space in which the front row of columns of the portico was placed, were terminated by perpendicular lines; but at the extremities of the façade, the lines at the external angles were always tapering. Upon each angle there was an astragal, or large bead, which returned horizontally along the top of the lintel or architrave. The general crowning member of the façade is always a very large cavetto or ornament in cornices, having a comparatively small projection, and decorated with vertical flutings or reeds. The whole of the walls, externally and internally, were covered with hieroglyphics; and it appears probable, that the general mass of building was first constructed, and the sculptures performed afterwards. In no instance did any of those hieroglyphics or ornaments interfere with the outlines of the building, all of which have been carefully preserved; and this circumstance alone tends, in no small degree, to produce that imposing effect so peculiar to Egyptian architecture.

Of Memphis, the second capital of Egypt, built several centuries after Thebes, not a vestige remains to mark with precision the spot where it stood. It contained the celebrated temple of Phtha (the Vulcan of the Greeks); also one to Osiris, where the sacred ox was kept, and one to Serapis, with an avenue of sphinxes at some distance. Strabo says, that there were many palaces situated along the side of a hill, stretching down to lakes and groves, 40 stadia from the city; and it is known that the Egyptians crossed lakes to convey their dead to the tombs which were hewn out of the rocks.

But the annihilation of the temples and palaces of Memphis is compensated by the existence of the pyramids, which stand in its supposed vicinity. About thirty still exist, and there are traces of many more. The three

brick upon solid foundations, and to cover them with boards and tiles. In process of time, their reflections, founded upon experience, led them on to the knowledge of the just rules of

proportion; the taste of which is natural to man, the author of his being having implanted in him the invariable principles of it, to make him sensible that he is born for order in all

largest are situated at Gees or Djiza, nearly opposite to Grand Cairo, and are named for their supposed founders, Cheops, Chephren, and Mycerines. Their height has been differently represented, and, owing to incorrectness, or different standards of measure, has been stated at all the gradations from about eight hundred to five hundred feet. The following dimensions, however, taken by the French engineers, may be given as very nearly accurate: That of Cheops, 448 feet in height, and 728 on each side of the base; Chephren, 398 feet in height, and 653 on each side of the base; and Mycerines, 162 feet in height, and 280 on each side of the base.

The pyramid of Cheops, which is the largest, is ascended by an uninterrupted series of steps, diminishing from four to two and a half feet high in approaching the top. The breadth of each step is equal to its height. Upon the top there is a platform 32 feet square, consisting of nine large stones, about a ton each, though inferior to some of the other stones, which vary from 5 to 30 feet long, and from 3 to 4 feet high. From this platform Dr. Clarke saw to the south the pyramids of Saccara, and on the east of these, smaller monuments of the same kind nearer to the Nile. He remarked also an appearance of ruins which might be traced the whole way from the pyramids of Djiza to those of Saccara, as if the whole had once constituted one great cemetery. The stones upon this platform, as well as most of the others employed in constructing the decreasing ranges from the base upwards, are of soft limestone, of the same nature as the calcareous rock upon which the pyramids stand. The pyramids are built with common mortar externally, but no appearance of mortar is discerned in the more perfect masonry of the interior. It has been calculated, that this pyramid was built 400 years before the first Olympiad, or about 3000 years ago. It was explored by Mr. Davidson in 1763; and with more success by Captain Caviglia in 1817.*

The second pyramid, that of Chephren, is thought to have been covered by stucco of gypsum and flint. Belzoni † discovered its entrance in the north front in 1818. Advancing along a narrow passage, 100 feet long, he found the great chamber 46 feet long by 16 wide, and 23 high, cut out of the solid rock. It contained a granite sarcophagus, half sunk in the floor, with many bones, some of which have proved to be those of the bull. A little to the east of this pyramid is the sphinx, cut out of the same sort of rock upon which the pyramids are built; its height from the knees to the top of the head is 38 feet.

To the south of these pyramids, there are others, which shoot far into the deserts of Libya, and are generally called the pyramids of Saccara. These erections appear to be more ancient than those about Gees. They are less perfect, and some of them are formed of unburned bricks. The most ancient bricks of Egypt were only dried by the heat of the sun; and that they might stick more closely together, the clay was mixed with chopped straw; and hence the Israelites, while in slavery in Egypt, made use of straw in making bricks. Some of these pyramids are rounded at the top, and are like hillocks cased with stone. ‡ One of them has steps like that of Cheops. The ranges or steps are six in number, each range being

25 feet high and 11 feet wide. The total height of this pyramid is 150 feet.

According to Herodotus, the pyramids were formed by distinct courses of stone, which successively diminished in size, as the proportions of the edifices required it. Every course was so much within that immediately below it, as to make each front of the pyramid form a sort of stair. This agrees with the descriptions of modern travellers. * A very simple machine, according to the same author, placed upon the first course, served to raise the stones destined for the construction of the second. The second being finished, a similar machine was fixed upon it, and so on for the rest; one or more of the machines being always left upon each of the courses already laid, to serve successively for raising the stones from step to step. It is pretty certain, that the pyramids had all originally an outward coat either of square flags of marble or of bricks, so that they presented to the eye a perfectly even slope; but much of this has disappeared, through the dilapidation of time and other causes. †

Many unsatisfactory conjectures have been formed, and theories adopted, with regard to the original design or use for which pyramids were built. The greater number of writers on the subject are of opinion, that they were erected for the tombs of kings and conquerors, to preserve their remains inviolate, and hand down their memory to the latest posterity. Herodotus states, that the Egyptians considered the pyramidal form as emblematical of human life, the broad base on the earth representing the commencement, and the gradation to a point, the termination of our existence. The emblem, if inverted, would bear an equally natural interpretation: yet this is the reason he alleges for pyramids being used for sepulture. That they were erected for astronomical purposes is a fanciful conjecture, although it is certain that they are constructed on scientific principles, and give evidence of some progress in astronomy, for their sides are accurately adapted to the four cardinal points. That they were meant for altars to the gods, their tapering form being in imitation of flame, as the Persians and other nations worshipped fire; or that they were constructed as a permanent memorial of the proper length of the cubit, of which it is said that all their dimensions contain a certain number of multiples, appear to be conjectures equally strained and fanciful. Still less were they adapted to the purpose of granaries, as some have supposed. That they were originally intended to remedy the disadvantage of the Delta, and particularly Upper Egypt, by attracting the clouds and eliciting a discharge of rain, may be considered as in some measure sanctioned by the enormous sphinx found in their vicinity, and its relation to the fertilizing of Egypt by the waters of the Nile, the sphinx, representing the head and bosom of a woman with the body of a lion, being designed to symbolize the annual inundation, which takes place while the sun passes through the signs of the zodiac, denominated the Virgin and the Lion. But whatever their original destination was, or whether they ever served any purpose farther than gratifying the vanity of their builders, they now, as has been well remarked, harmonize admirably with a dewless heaven, a sandy waste, a people that

* See Greaves' *Pyramidologia*; Thevenot; Vanaleb *Relat. de l'Egypte*; P. Lucas' *Voyage du Levant*, &c.

† Mallet, *Descript. de l'Egypte*; Sicard, *Mém. des Missions du Levant*, &c.

* See Belzoni's *Researches*, i. 213.—3d edit.
† *Ib.* pp. 395-415. ‡ Clarke's *Travels*.

things. Hence it is, as St. Austin observes, that in a building, where all the parts have a mutual relation to each other, and are ranged each in its proper place, the symmetry catches

the eye, and occasions pleasure: whereas if the windows, for instance, are ill disposed, some large and others small, some placed higher and some lower, the irregularity offends the sight

have been. There is now a sublimity in their uselessness. Standing on the same earth which has entombed so many thousand generations, pointing to the same sky which heard the cry of the oppressed when they were building; they no longer belong to Cheops or Sesostrius, Pharaohs or Ptolemies, Mamelukes or Turks, but to the imagination of mankind. "The humblest pilgrim," says Dr. Clarke, "pacing the Libyan sands around them, while he is conscious that he walks in the footsteps of many mighty and renowned men, imagines himself to be for an instant, admitted into their illustrious conclave. Persian satraps, Macedonian heroes, Grecian bards, sages and historians, all of every age, and nation, and religion, have participated, in common with him, the same feelings, and have trodden the same ground."

Although Alexandria and Cairo have occupied distinguished places in the annals of Egypt, yet possessing little that is connected with its ancient architecture as a distinct school, and that little having been pillaged from the treasures of the Thebaid, it would be improper here to enter into any details respecting these splendid cities. The ancient Pharos has long been utterly destroyed; but to the eastward of the present Pharos, upon the shore, are two obelisks, or Cleopatra's needles, above 70 feet high, inscribed with hieroglyphics which might assign them a very ancient origin; but it is impossible to determine whether they have a just claim to such antiquity, or whether the figures upon them may only be imitations. Nearly on a line with Pharos, and without the walls of ancient Alexandria, stands the magnificent pillar of Pompey. Its height is about 90 feet, and its principal parts are of the Corinthian order, though the proportions and ornaments are of a mixed species. It has been ascribed to Ptolemy Philadelphus in memory of his beloved queen Arsinoë; and others have assigned it to Ptolemy Evergetes. If not directly erected to the memory of Pompey, it is probable that Caesar, who lamented Pompey's death, might, by the assistance of Cleopatra, have the monument dedicated to his honour, and held sacred to his name.

Before leaving the subject of Egyptian architecture, it may be observed, that although we have no direct account of the manner in which the immense masses of stone which composed its ancient edifices were raised from the quarries, carried to, and placed in their respective situations; yet it is evident, from the vestiges of the communications made from the Nile into the extensive quarries on its banks, that advantage had been taken of the annual rise of that river to raise and float the great blocks which they employed. In all that regards the operations which afterwards took place, in removing them from the water to the building, preparing them for, and placing them in their several positions, such as raising obelisks and columns of great magnitude, and covering the latter with platforms which composed their terraces and roofs, we are left wholly to conjecture. If descriptions, or intelligence of any kind on this subject, were ever committed to writing, they must have been destroyed by Cambyzes, the Romans, or Amrou. It may also be remarked, that although the size and qualities of the materials, and the principles of construction, are calculated to ensure durability; yet the climate of Egypt is also favourable; for even Egyptian structures could not have withstood the effects of our frequent and severe

changes of atmosphere during a period of three thousand years. e

The ancient cities and palaces of India were constructed on a scale corresponding with its great wealth and population. In the historical poem called the Mahabharit, translated by Abul Fazel, it is said, that Oude, the capital of a province of that name, to the north east of Bengal, was the first regular imperial city of Hindostan, and that it was built in the reign of Krishen, one of the most ancient rajahs. "This city," says Sir W. Jones, "extended, if we may believe the Bramins, over a line of ten yojans or 40 miles." According to the Mahabharit, Oude continued the imperial city 1500 years, until a prince of the dynasty of the Surajas erected Canouge upon the banks of the Ganges, and made the circumference of its walls 50 coss or about 87 miles. Strabo, † from Megasthenes, who had seen Canouge, says it was situated at the confluence of another stream with the Ganges; that its form was quadrangular, the length 80 stadia, breadth 15, or, taking the mean stadium of the ancients, about 8 miles by 1½. Arrian gives the same dimensions as Strabo, and says, that there were 570 towers on the walls, and 65 gates. This imperial city, and many others of equal extent and magnificence, have now passed away, like so many splendid scenes on the great theatre of the east; but as the religion of India has been more permanent than its political relations, we are enabled, from the remains of its sacred edifices, to trace distinctly the characters of ancient Indian architecture.

We find accounts of five different forms of Indian temples: 1. Pyramids; 2. Excavations; 3. Temples composed of square or oblong courts; 4. Temples in the form of a cross; and 5. Temples perfectly circular. It cannot be determined, as in the case of Egypt, whether or not the construction of Indian pyramids preceded that of their excavations. To construct a pyramid of rude stones, however, is certainly a much simpler operation than forming a cavern ornamented with sculpture; so that although it may be conceived that mankind might, for the purposes of worship, make use of the simple plain cavern, either natural or artificial, previous to the construction of buildings of great magnitude on the surface, yet it is not very probable that splendid excavations, such as those at Elephanta and Vellore, in which are rich sculptures, could have preceded the erection of a rude pyramid.

The excavated temples of India are numerous and extensive, and the public has been frequently furnished, of late, with exact representations and full details respecting them. The three principal ones are those of Elephanta, Salsette, and Vellore or Ellora. Elephanta is situated near Bombay, in an island so named from the figure of an elephant being cut out upon the rocks on the south shore. The grand temple is 150 feet square, and supported by four rows of pillars; along the side of the cavern are from 40 to 50 colossal statues from 12 to 15 feet high. The face of the great bust is 5 feet long, and the breadth

a See Pococke's Description of the East, 1743-5, 9 vols. fol.; Norden's Drawings of Ruins and Colossal Statues at Thebes, 1741, 4to.; Savary's Letters on Egypt, 1786-7, 2 vols. 8vo.; and Granger, Volney, and Denon's Travels in Egypt, &c.

† Lib. xv.

and seems to do it a kind of injury, as St. Austin expresses it.¹ It was therefore by degrees, that architecture attained the height of perfection, to which the masters in the art have carried it. At first it confined itself to what was necessary to man in the uses of life, having nothing in

view but solidity, healthfulness, and convenience. A house should be durable, situated in a wholesome place, and have all the conveniences that can be desired. Architecture afterwards laboured to adorn buildings, and make them more splendid, and for that reason called in

I Itaque in hoc ipso edificio singula bene considerantes, non possumus non ostendi, quod unum ostium videmus in latere, alterum prope in medio, nec tamen in medio collocatum. Quippe in rebus fabricatis, nulla cogente necessitate, iniqua dimensio partium facere ipsi aspectui velut quamdam videtur injuriam. S. Augustin. de ord. l. 2. c. 11. n. 34.

across the shoulders 80 feet. At the west end of this pagoda is a dark recess 20 feet square, totally destitute of ornament; the altar is in the centre, and there are two gigantic statues at each of the four doors by which it is entered. Hunter * states, that on entering Elephanta, there is a piazza which extends from east to west 60 feet, that its breadth is 16 feet, and that the body of the cavern is on every side surrounded by similar piazzas. The excavations in the Island of Salsette, which is situated also near to Bombay, are described as being like a town. The front is hewn out of the rock into four stories or galleries, in which there are 300 apartments; these apartments have generally an interior recess or sanctuary, and a small tank for ablution. The grand pagoda is 40 feet high to the soffit of the arch or dome; it is 84 feet long, and 46 broad. The portico has fine columns decorated with bases and capitals; immediately before the entrance into the grand temple are two colossal statues 27 feet high. Thirty-five pillars of an octagonal form, about five feet diameter, support the arched roof of the temple; their bases and capitals are composed of elephants, horses, and tigers, carved with great exactness. Round the walls two rows of cavities are placed with great regularity for receiving lamps. At the farther end is an altar of a convex shape, 27 feet high, and 30 in diameter; round this are also cavities for lamps, and directly over it is a large concave dome cut out of the rock. Immediately about this grand pagoda, there are said to be 90 figures of idols, and not less than 600 within the precincts of the excavations. But magnificent as the excavations at Elephanta and Salsette are, they are surpassed by those near Vellore or Ellora, which is situated 18 miles from Aurungabad, capital of the province of Balagate. As it is impossible to describe these excavations without exceeding the limits assigned to this Note, the curious reader is referred to Asiatic Researches, vol. vi.; Sir W. Jones; Maurice on Indian Antiquities; Daniell's Hindoo Excavations, 1803, fol.; and Hodges' Select Views and Travels in India.

The third kind of Indian temples are those composed of square or oblong enclosures. The largest remaining is that of Seringham, situated near Trichinopoly. The circumference of the outward wall is said to extend nearly four miles. The whole edifice consists of seven square enclosures, the walls being 350 feet distant from each other. In the innermost spacious square are the chapels. In the middle of each side of each enclosure wall, there is a gateway under a lofty tower; that in the outward wall, which faces the south, is ornamented

with pillars of precious stones, 33 feet long, and 5 feet diameter. *

The fourth kind of Indian temples are those in the form of a cross. The most noted of these is that of Benares, in the city of Casi, on the banks of the Ganges, down to which there is a flight of steps. From the earliest period of history, it has been devoted to Hindoo religion and science. The form of the temple is that of a great cross, with a cupola in the centre, which, towards the top, becomes pyramidal. At the extremity of each branch of the cross, which are of equal length, there is a tower with balconies, to which the access is on the outside.

Of those temples which are of a circular form, Sonnerat thinks that Juggernaut is the most ancient in India, and says that the Bramins attribute it to the first king on the coast of Orissa, who lived 4800 years ago. Its plan is a perfect circle of immense size. The image of Juggernaut, which is only another name for the god Mahadeo, stands in the centre of the building, upon an elevated altar. Mr. Hamilton describes the idol as being an irregular pyramidal black stone, and the temple as deriving light only from lamps. He compares the edifice to a great butt set on end.

Besides these, which are mentioned as specimens of the different forms of ancient Hindoo temples, one more requires to be noticed. The Ayeen Akbery relates, that near to Juggernaut is the temple of the Sun, in constructing which the whole revenue of the Orissa was, for 12 years, wholly expended; that the wall which surrounds the whole is 150 cubits high, and 19 cubits thick; that there are three entrances; at the eastern gate are two elephants, each with a man on its trunk; on the west are two figures of horsemen completely armed; and over the northern gate are two tigers sitting upon two dead elephants. In front of the gate is a pillar of black stone, of an octagonal form, 50 cubits high. After ascending nine flights of steps, there is an extensive enclosure, with a large cupola, constructed of stone, and decorated with sculpture. But of this splendid temple, so minutely described in the Ayeen Akbery, not a vestige is now to be found.

The ancient architecture of Persia can be considered chiefly as it regards its cities and palaces; for, with the exception of the temple of Belus, and some other temples, the Persian mythology did not admit of sacred edifices. Of Babylon, the temple of Belus, Nineveh, Susa, and Ecbatana, minute descriptions will be found in Rollin's History of the Assyrians, Persians, and Medes, and in the accompanying Notes. The description of the ruins of Persepolis, given in the second volume of the Ancient History, p. 138—145, Note, renders any investigation of Persian architecture unnecessary in this place.

These three countries—Egypt, India, and Persia—comprehend nearly all that is great and ingenious in the most ancient state of architecture. The countries to the north and west furnish few specimens of ancient art, and China scarcely possesses an edifice in which great design or scientific skill is displayed.—Ed.

* Archæol. vol. vii. p. 287.

* Voyages de M. Sonnerat, tom. i. p. 217.; and Robertson's India.

other arts to its aid. At last came pomp, grandeur, and magnificence, highly laudable on many occasions, but soon strangely abused by luxury.

The holy scripture¹ speaks of a city built by Cain, after God had cursed him for the murder of his brother Abel; which is the first mention of edifices in history. From thence we learn the time and place in which architecture had its origin. The descendants of Cain, to whom the same scripture ascribes the invention of almost all the arts, carried this, no doubt, to a considerable height of perfection. And it is certain, that after the deluge, men, before they separated from each other, and dispersed themselves into the different regions of the world, resolved to signalize themselves by a superb building, which again drew down the wrath of God upon them. Asia, therefore, was the cradle of architecture, where it had its birth, where it attained a great degree of perfection, and from whence it spread into the other parts of the world. Babylon and Nineveh, the largest and most magnificent cities mentioned in history, were built by Nimrod, Noah's great grandson, and the most ancient of conquerors. I do not believe, that they were carried at first to that prodigious magnificence, which was afterwards the astonishment of the world; but certainly they were very great and extensive from thenceforth, as the names² of several other cities, built in the same times after the model of the capital testify.

The erection of the famous pyramids, the lake Meris, the labyrinth, the considerable number of temples in Egypt, and the obelisks which are to this day the admiration and ornament of Rome, show with what ardour and success the Egyptians applied themselves to architecture. It is, however, neither to Asia nor Egypt that this art is indebted for that degree of perfection, to which it attained, and there is reason to doubt, whether the buildings, so much boasted by both, were as estimable for their justness and regularity, as their enormous magnitude; in which, perhaps, their principal merit consisted. The designs, which we have of the ruins of Persepolis, prove that the kings of Persia, of whose opulence ancient history says so much, had but indifferent artists in their pay. However this may be, it appears from the very names of the three principal orders of architecture, that the invention, if not perfection of them is to be ascribed to Greece, and that it was she who prescribed the rules, and supplied the models of them. As much may be said with regard to all the other arts, and

almost all the sciences. Not to speak in this place of the great captains, philosophers of every sect, poets, orators, geometricians, painters, sculptors, architects, and in general, of that pre-eminence in all that relates to the understanding, which Greece attained: whither we must still go as to the school of good taste in every kind, if we desire to excel.

It is a misfortune that there is nothing written by the Greeks upon architecture now extant.³ The only books we have of theirs upon this subject, are the structures of those ancient masters still subsisting, whose beauty, universally acknowledged, has for almost two thousand years been the admiration of all good judges: works infinitely superior to all the precepts they could have left us; practice in all things being infinitely preferable to theory.⁴ For want of Greeks, Vitruvius, a Latin author, will come in to my assistance. His being architect to Julius and Augustus Cæsar (for according to the most received opinion he lived in their times) gives good reason to presume upon the excellence of his work, and the merit of the author, and the critics accordingly place him in the first class of the great geniuses of antiquity. To this first claim on our confidence, may be added the character of the age in which he lived, when good taste prevailed universally, and the emperor Augustus piqued himself upon adorning Rome with buildings equal to the grandeur and majesty of the empire; which made him say, that he found the city of brick, but left it almost entirely of marble.⁵ I had great occasion for so excellent a guide as Vitruvius, in a subject entirely new to me. I shall make great use of the notes Mr. Perrault has annexed to his translation of this author, as well as of Mr. Chambré's reflections in his work entitled, *Ancient and Modern Architecture Compared*, which I know is in high esteem with the judges; and those of Mr. Felibien, in his book, called, *Of the Principles of Architecture*, &c.

³ Almost all the works of the ancients on the arts of design, which were familiar to them, are lost to us. It may be remarked, as a leading cause of this, that the Greek and Italian monks of the 9th, 10th, and 11th centuries, (to whom we owe the preservation of the classics) being incompetent to the imitation of the several embellishments with which they found MSS. on the subject of the arts frequently elucidated, laid them aside in despair; and, by this neglect, they have perished. Vitruvius is preserved to us at the expense of the figures. —Ed.

⁴ In omnibus ferè minus valent præcepta, quam experimenta. *Quintil.*

⁵ Urbem, neque pro majestate imperii ornatam, et inundationibus incendiisque obnoxiam, excolunt adeo, ut jure sit gloriatum, marmoream se relinquere, quam lastertiam accepisset. *Sueton. in Aug. c. 28.*

¹ Gen. iv. 17.

² Erec, the long city. Rehobot, the broad city. Resen, the great city. According to the Hebrew, Gen. x. 11, 12.

The ancients, had, as well as we, three sorts of architecture; the civil, the military, and the naval. The first lays down rules for all public and private buildings for the use of citizens in time of peace. The second treats of the fortification of places, and every thing of that kind relating to war; and the third the building of ships, and whatever is consequential of, or relates thereto. I shall speak here only of the first, intending to say something elsewhere of the two others; and shall begin by giving a general idea of the several orders of building.

SECT. II.

Of the three orders of Architecture of the Greeks, and the two others, which have been added to them.*

The occasion there was for erecting different sorts of buildings, made artists also establish

different proportions, in order to have such as were proper for every kind of structure, according to the magnitude, strength, splendour and beauty, they were directed to give them: and from these different proportions they composed different orders.

Order, as a term of architecture, signifies the different ornaments, measures, and proportions of the columns and pilasters, which support or adorn great buildings. There are three orders of the architecture of the Greeks: the Doric, Ionic, and Corinthian. They may with reason be called the supreme perfection of the orders, as they contain not only all that is fine, but all that is necessary in the art; there being only three ways of building, the solid, the middle, and the delicate, which are all perfectly executed in these three orders. To these, the Latins have added two others, the Tuscan and Composite orders, which are far below the former in value and excellency.

6 The state of architecture in Greece in the earlier ages of its history is very obscurely mentioned by the ancients. It is remarkable, that the Greeks, who carried the practice of many arts and sciences to a degree of wonderful perfection, should have been so little solicitous to examine the causes of their rise amongst them, or to trace their progress. Contented with the idle fables handed down from early times, and repeated with additions and embellishments acquired from the imagination or garrulity of succeeding narrators, their real knowledge of the origin of those objects which excited their pride and admiration, appears to have been vague and unsatisfactory. Even their national history itself, in its early ages, if we except, perhaps, the first book of Thucydides, received no illustration from the exertions of rational criticism and philosophical inquiry.

Throughout the whole of what have been called the heroic ages of Greece, architecture was imperfectly practised, and did not rise to any dignity as a fine art. In the early stages of civilization, the main object of an assembled population would naturally be security; and from the lawless condition of society, during this period of Grecian history, it appears to have been necessary for the inhabitants to build their towns in situations difficult of access, and at some distance from the sea, in order to avoid the piratical expeditions so natural at all times to the maritime population of this part of the world. For the attainment of the requisite security, they constructed round their fortresses gigantic and ponderous walls, the remains of several of which are certainly the first specimens of building extant in that country. Of these, the walls of Tiryns are the most ancient, and perhaps the most celebrated. Homer gives to the town the characteristic epithet of *ruχίστη*,* a clear proof that the walls were calculated to excite admiration in his time as well as in our own. It is difficult to ascertain the precise date of their erection; but they are said to have been the work of Lycians, under the direction of Proetus, the brother of Acrisius.† This story would carry us five or six generations higher than the era of the Trojan war. In after times, from their massive proportions, as well as from the absence of auth-

entic information respecting them, they were generally considered as having been raised by the Cyclops. They are about a quarter of a mile in circuit, and embrace a rising ground of inconsiderable elevation, situated in the plain of Argos. They have separate entrances; and leading from one of these may be seen a covered gallery or passage formed in the thickness of the wall, the course of which it follows to some extent; the roof constructed of large stones inclined towards each other, and forming an acute angle by their junction.

In the vicinage of Tiryns, nearly coeval with it, but far surpassing it in extent, are the remains of Mycenæ. This city, so distinguished during the heroic, remained during the flourishing ages of Grecian history in a state of ruin and desolation. Tradition mentions Perseus as its founder; but the execution of its walls, like those of its neighbour-town, is referred to the hands of the Cyclops. The present condition of Mycenæ appears to be very much that in which it was seen by Pausanias, and even by Thucydides, five hundred years before. The former says, that, in his time, among the ruins of the walls, a gate remained, over which was the representation of two lions.‡ This gate, which seems to have been the principal entrance to the city, does not stand even with the course of the walls, but is placed considerably within the line described by their general circuit. The approach, therefore, is for some paces by a sort of passage between the walls, and scarcely of a greater width than the gate by which it is terminated. Defence was the object of this contrivance, by which few persons abreast could reach the entrance at the same time, and in the attempt must necessarily have been exposed to destruction from the weapons of the inhabitants stationed on the ramparts of each wall which formed the avenue. By the accumulation of earth, this gate is buried nearly up to the top, where it is not more than eight feet wide, yet the lintel is one massive stone twelve feet in length. The jambs, which probably consist only of single stones, are inclined towards each other, the width of the opening being gradually diminished from the bottom, a contrivance by which the whole building is apparently strengthened, and which singularly coincides with the manner of Egyptian building. The walls themselves

* Il. ii. 559.

† Strabo, lib. viii. Pausan. Argol. c. xvi. 25.

‡ Pausan. Argol. c. xvi.

I.—The Doric Order.

The Doric order may be said to have been the first regular idea of architecture, and as the

have in their construction more of care and art, and exhibit the marks of a period somewhat later than those of Tiryns: for, although the polygonal blocks are nearly of the same dimensions, they are fitted together with great exactness, and have been so shaped in part, as to ensure some degree of regularity; whereas, the walls of Tiryns consist of rude masses of rock piled on each other, the interstices of which are filled up with small stones, and fitted together by the ingenuity of the builder, without having been previously formed by the aid of the chisel or the saw.

In various parts of Greece, there are other walls, which, from a resemblance in their construction, and, in some instances, even in their magnitude, to those of Tiryns and Mycenæ, have acquired the appellation of *Cyclopian*. In considering them, however, as among the first attempts of Grecian art, some caution is requisite; for those characteristics which at Athens and Argos may properly be viewed as the unquestionable marks of the most ancient times, do not necessarily lead to a similar conclusion, when found in Macedonia and Epirus. Perhaps the best criterion of antiquity is afforded by their massive and gigantic proportions; for we should scarcely be justified in indiscriminately referring monuments to these remote ages solely from the appearance of a rudeness and peculiarity which may have arisen from ignorance, or even from the affectation of an archaism not unfrequently to be met with. Indeed it is manifest, that, as this is the readiest and simplest mode of building, as practised in all countries and in all ages, it can only be in consequence of their vast dimensions, that such monuments have received the appellation of *Cyclopian*; which term, therefore, when properly explained, will only signify architecture of an indefinite antiquity, of rude workmanship, and of which the dimensions are such as almost to appear to be the effect of preternatural force. It would be an unprofitable task to inquire into the history of those fabulous builders from whom this title has been derived. The result could not fail to prove in the greatest degree contradictory and uncertain; as the Greeks, with their usual negligence and facility of belief, have given the same term to all structures of a similar description, without any reference to their real authors, age, or origin. The term being thus vague in its application, it is of the less consequence whether we trace the supposed inventors of the style to Lycia, to Sicily, or to Crete; or consider them as a portion of the Pelagic race, the ancient inhabitants of Greece; for, in truth, all these tribes, as well as many others, in the early periods of their history, may with equal propriety lay claim to the Cyclopian character in their architectural works.

Those motives of defence and security, which, during the unsettled and turbulent condition of Greece at the first dawning of its civilization, prompted the small independent states to strengthen the walls of their cities with such incredible labour, seem very generally to have influenced these communities, as well as some of the more powerful individuals, in the measures adopted for the preservation of their wealth and valuable possessions. Treasuries were common in Greece at a very remote period. Minyas, who ruled the Boeotian Orchomenos, considerably before the era of the Trojan war, is said to have been the first who erected a building for this purpose: * and the consecration of precious offerings to

eldest son of this art, had the honour to be also the first in building temples and palaces. The antiquity of its origin is almost immemorial: Vitruvius¹ however ascribes it with probability

Vitr. l. iv. c. 1.

Apollo at Delphi is coeval with the first notices of Grecian history. The treasury of the Corinthians was built by Cypselus, the father of Periander, about 650 B.C. The treasury of Atreus and his family, mentioned by Pausanias as existing at Mycenæ in his time, is still extant, and forms one of the most interesting monuments of the heroic ages of Greece. It is a building of a conical shape, or, more correctly speaking, in the form of a paraboloid, about 50 feet in diameter, and rather more in height; the stones of which it is composed are of great magnitude; that in particular, which covers the entrance, is of enormous dimensions. They are placed on horizontal layers, each gradually projecting over the other until they meet at the top: the whole, therefore, has the appearance of a pointed dome, but the mode in which it is constructed denotes an entire ignorance of the principle of the arch. That the interior surface was formerly covered with plates of brass, we have good reason to suppose, for large nails of the same metal, by which they were anciently fastened, still adhere to the stones in different parts of the building. The whole of this singular edifice is covered with earth, and presents in its outward form the resemblance of a mound or tumulus. This circumstance has, no doubt, suggested the appellation of the tomb of Agamemnon, which it usually bears, and which is also mentioned by Pausanias; but independently of his description of the subterranean treasury, which sufficiently points out the destination of this building, * the Homeric rites of sepulture are too accurately detailed to render it possible for us to admit the probability of such a supposition. Some additional illustration is to be derived from the few remains of the treasury of Minyas, which are still to be seen at Orchomenos; and from these, as well as from the account of Pausanias, † there is little doubt that it was precisely similar to that of Atreus. The scattered notices which we possess of works erected throughout Greece for the same purpose, contribute to remove all doubt as to the origin of the structure, which, by a conjecture equally erroneous, has been sometimes denominated the temple, as well as the tomb of Agamemnon. Homer perhaps alludes to a building not very different from these, when he mentions the treasury of Priam, into which the aged monarch is said to descend, for the purpose of selecting the precious objects for the ransom of the dead body of his son: hence we may reasonably infer that it was a subterranean edifice. He gives it also the peculiarly characteristic epithet of 'lofty roofed.' ‡ It is to be observed that the later treasuries, although they preserved the circular form, were often built with porticoes in front. Pausanias describes the treasury of the state of Megara at Olympia, as having the war of the giants represented in the tympanum of the pediment; || from which it is evident that there must have been a portico. It is not unlikely that the Pantheon at Rome, which corresponds with this description, may originally have had a similar destination.

If we seek in Homer for those parts of architecture properly denominated *ornamental*, we shall discover scarcely any thing to answer this description, and nothing that can afford the least intimation of his having possessed any knowledge of those varieties under which the dif-

* Pausan. Boeot. c. xxxiv.

* Pausan. Cor. c. xvi.
† Hom. Il. xxiv. 191.

† Ib. Boeot. c. xxxviii.
Pausan. El. Post. c. xix.

enough to a prince of Achaia, named Dorus, the same evidently who gave his name to the Dorians, and who, being sovereign of Peloponnesus, caused a magnificent temple to be erected

in the city of Argos to the goddess Juno. That temple was the first model of this order; in imitation of which, the neighbouring people built several others: the most famous of these

ferent modes of building have since been classed. The chief decoration of his age seems to have consisted in a polished surface. * The charm and grace of forms were unknown; for, although the chambers and buildings themselves are sometimes said to be lofty, there is no indication of any symmetrical proportion. In the imaginary palace of Alcinoüs, which is intended as the model of ideal perfection in the art, no attempt is made to describe architectural beauties; but to compensate for the defect, no exaggeration is spared to make it rich. We have brazen walls and golden doors, with silver posts and lintels. † The palace of Menelaüs is represented in nearly the same general terms of magnificence. It was full of brass and gold, silver and ivory—it was resplendent as the sun and moon, and appeared in the eyes of Telemachus, like the mansions of Jupiter himself; All this seems pretty clearly to indicate the total deficiency of what can with any propriety be called architectural ornament.

Much of the simplicity which reigned in these early buildings may, perhaps, in a great measure, be ascribed to the paucity of pagan legends and superstitious rites during that period. It is certain, that the same spirit of devotion, which, in succeeding times, filled every state with splendid monuments of art, did not then exist, and there is reason to believe, that in the Homeric age temples were scarcely known in Greece. In the absence, therefore, of this stirring source of future magnificence, the architecture of the Greeks was confined to the erection of the habitations of their princes, and the buildings dependant on them. These mansions, whose chief recommendation was constituted by solidity and extent, were built round a court—a plan universally adopted in succeeding ages, and which still prevails in the same countries. The palace of Priam answers this description: it was composed of hewn stone, constructed with open chambers, and, in addition to the parts occupied by the old king, contained fifty apartments allotted to his sons, and, on the opposite side of the court, twelve separate habitations for his sons-in-law and their wives. ‡ The chambers in general of the Homeric buildings, with the exception of the great hall of the palace, appear to have been small. Rich furniture was not uncommon; the seats and couches were frequently distinguished by their costly materials and beautiful workmanship; § but the chief decoration consisted, probably, in the magnificence of the arms, and in the skillful manner in which they were arranged. ¶ We may conclude that the form of the roof was pointed; for, in the funeral games, when Ajax and Ulysses grasp each other for the purpose of wrestling, they are compared by Homer to two beams of the roof, which some able architect had closely fitted together at the summit ** These rafters in subsequent ages, retained the appellation by which they are characterized in the *Iliad*. †† Terms of admiration are sometimes used in mentioning the beams, ‡‡ but they are vague, and contain nothing descriptive of their quality. The interior part of the roof, it would seem, was usually left open to the top, with the insertion, however, of other timbers in order to

afford additional security. The portico of the Homeric buildings, * seems to have been a species of raised platform or exedra, probably covered at the top, but exposed at the sides to the air, and to the enjoyment derived from this exposure, we may chiefly attribute its origin—at least, this is the purpose to which we find it generally applied, and the most rational explanations of the word justify this supposition. † It is not certain that the author of the *Iliad* had any knowledge of houses formed in regular divisions of stories. Two passages evidently alluding to such buildings, are of doubtful antiquity; ‡ and the true meaning of a third, has been forcibly bent to this interpretation. § In the *Odyssey*, however, mention of the upper chambers, especially as the residence of women, frequently occurs. In the latter poem, also, columns are mentioned, although neither the word itself, nor the thing signified, is to be found in the pages of the *Iliad*. According to the general opinion, the material of which columns were formed was wood; and the accuracy of this opinion is confirmed by the circumstance, that, throughout the *Odyssey*, they are never described in detail, nor do they make part of any description of architectural magnificence. Their height only is occasionally alluded to. Epithets of admiration are frequently bestowed on the walls, the doors, the beams and pavement, while the column is never said to be well built, well polished, or aptly proportioned.

Whatever be the precise date we may assign to the age of Homer, it is certainly to be viewed as nearly contemporaneous with the occurrence of an event which forms a most important era in the history of Greece. By the return of the Heraclids to the Peloponnesus, and the circumstances attendant on the conquest of the peninsula, a change, equally extensive both in the manners and in the political condition of the inhabitants, was effected. Bloody wars, and the conduct of the Dorian invaders, contributed to check any advances which had already been made in refinement, and to plunge the country into a state of comparative ignorance and barbarism. How long these ages of darkness continued, it would be difficult with any accuracy to determine; but, for several centuries after the return of the descendants of Hercules, the history of Greece presents nearly a total blank. During the heavy pressure of such causes, the progress of ornamental architecture, we may be certain, as well as of all those arts of civilization which had previously been cultivated, was entirely arrested. In this situation, it is manifest that any inquiry must be fruitless, which has for its object to ascertain in what manner, and at what period, architecture became possessed of those characteristics which subsequently distinguished the different orders of building. The remarkable similarity of manner, also, which prevailed throughout Greece for so many ages, renders it difficult to assign with any certainty true dates to the buildings of antiquity, or from the peculiarity of their remains, to fix the period of their construction; for, unlike the gradual progress of Gothic architecture, in which the regular variation of style and ornament furnish conclusive evidence of the era of the work, the

* Il. vi. 315. † Od. vii. 89. ‡ Od. vi. 45, 74.

§ Il. vi. 248—250.

¶ Il. xi. 644. xviii. 300. Od. xx. 60.

‡ Il. vi. 321.

†† Poll. x. lib. i. c. 8.

§ Il. xxiii. 712.

¶ Od. xix. 37.

* Il. vi. 242. xx. 11. xxiv. 644. Od. iii. 309. vii. 330. xx. 170.

† Vid. Hesych. in Að.

‡ Il. ii. 514. vii. 184. § Il. vi. 248.

was that consecrated by the inhabitants of the city of Olympia to Jupiter, surnamed the Olympic.

The essential character and specific quality of

buildings of Greece during these ages generally preserved the same uniformity of design, and chaste simplicity of execution.*

According to Vitruvius, as stated in the text, it was in the temple of Juno, at Argos, where the Doric order rose first to a marked eminence, and became the model for the magnificent edifices afterwards erected throughout Greece. After it had been established there, it was employed in the temple of Jupiter Nemeus, between Argos and Corinth; of Jupiter Olympus, at Olympia in Elis; in a splendid triple portico in the city of Elis; and also in three temples, in the same city, to Juno, Minerva, and Dindymene; at Eleusis, in the great temple to Ceres; in that of Minerva, at Sunium; and in the temple of Minerva Parthenon; in the entrance to the Acropolis, and other public edifices of great magnitude and splendour at Athens. In many of the islands there were also temples of the Doric model: that of Apollo in the isle of Delos; Juno in Samos; Jupiter, Panellenius, Ægina, and Silenus, in Sicily; and many others in places of inferior note. Many of these edifices were of great magnitude. The temples of the Greeks were universally of an oblong form; in some, the porticoes were at the ends only; in others, they were extended quite round the cell, some in single, others in double ranges; some were covered with roofs, others were left partly uncovered; and some of them were divided by ranges of pillars along the middle of the cell. The superstructure was placed upon a platform composed of three steps, which surrounded the whole edifice, and upon which the columns were all placed without bases. The number of columns were either 6 along the ends, and 13 along the sides, or 8 along the ends, and 17 along the sides.† When formed upon so large a scale, and the ranges of columns so distinctly insulated, the essential parts of the Doric order produced effects not to be exceeded for simplicity and majesty; even the imperfect fragments now remaining, appear to have far surpassed the expectations of persons well qualified to appreciate their merits. In the earlier specimens, the diameters of the Doric columns were very great in proportion to their height; that of the temple of Silenus, in Sicily, being only five diameters in height; but, in process of time, these relative dimensions were changed, and a greater proportion of delicacy introduced. The Doric style was, with very few exceptions, the only one employed in Greece, or its European colonies in Sicily and Italy, until after the Macedonian conquest.

The temple of Apollo Panionius, in Ionia, was built after the Doric manner; but the Ionians, not satisfied with the simplicity of this order, invented another of a more delicate character, and named it after their own country, the *Ionian*. They made the height of the column

the Doric order, is solidity. For this reason it ought principally to be used in great edifices and magnificent structures, as in the gates of citadels and cities, the outsides of temples, in

greater in proportion to its diameter than in the Doric; the capital was totally different in principle, the entablature was also changed in its members and proportions, and a base was added to the bottom of the column. Of the origin of this column we have no satisfactory account. Vitruvius, and Rollin after him, reckon, that as the Doric was strong and masculine, the Ionians modelled their order with female delicacy, and that the volutes were taken from the curls of hair on each side of the face; but it is difficult to conceive how the proportions of a Greek order of architecture could be taken from the human figure, to which it has no relation or resemblance. A more simple and natural hint for the Ionic volute, seems to be the curling of the bark of a rude upright post, crushed down by a weight laid upon it.

The edifices constructed after the Ionic order were numerous and magnificent. It was employed in the temple of Bacchus at Teos; Apollo at Miletus; Minerva at Priene and Tegea; and of Diana at Magnesia and Ephesus. It was likewise used in the temple of Minerva Polias in the Acropolis; in those of the Delphic Apollo and Æsculapius at Athens; and in a temple of Juno in Attica. The temple of Diana at Ephesus is described by Rollin in the text. That at Magnesia was constructed under the direction of Hermogenes. He made the general dimensions the same as for a double range of columns; but, in order to afford more space in the porticoes, he omitted the inner range. By that means a clear space was left between the outer range and the wall of the cell, and he thereby established what is called the *Pseudo-dipteros*. Vitruvius speaks with great veneration of the talents of this architect. The temple of Minerva Ulea at Tegea, designed and erected under the direction of Scopas, was of singular construction. The peristyle which surrounded the temple was of the Ionic order; the cell was divided into three aisles, by two rows of Doric columns, and over these were placed others of the Corinthian order. The sculpture upon the two pediments was by the hand of Scopas himself.‡

The artists of Grecia Proper, perceiving that, in the Ionic order, the severity of the Doric had been departed from, by a happy effort invented a third, which still much surpassed the Ionic in delicacy of proportion, and richness of decorations; this was named the *Corinthian* order. The merit of this invention is ascribed to Callimachus, an Athenian sculptor, who lived towards the end of the Peloponnesian war, and who is said to have had the idea suggested to him, by observing Acanthus leaves growing around a basket, which had been placed, with some favourite trinkets, upon the grave of a young Corinthian lady; the stalks which rose among the leaves having been formed into slender volutes by a square tile which covered the basket. But, with all our admiration of Greek genius, the fact must not be overlooked, that in the pillars of several of the temples in Upper Egypt, whose shafts represent bundles of reeds or lotus bound together in several places by fillets, the capitals are formed by several rows of delicate leaves. In the splendid ruins of Vellore in Hindostan, the capitals are also composed of similar ornaments; and it is likewise well known, that the Persians, at their great festivals, were in the habit of decorating with flowers the tops of the pillars which

* See an elegant little essay by the Earl of Aberdeen, entitled, "An Inquiry into the Principles of Beauty in Grecian Architecture: London, 1822," 12mo. To this work we have been very considerably indebted for the information contained in the above note.—The principal buildings of Sicily, and of Magna Græcia, still existing in our time, may probably be classed in the following chronological order—Syracuse, Paestum, Selinus, Segesta, and Agriguntum. An attempt to trace the history and progressive improvement of the Greek states of Sicily and of Italy, would be an interesting work, and is still a desideratum in our literature.

† Vitruv. Anacharsis; Stuart's Antiq. Athens; Ionian Antiq.

‡ Anacharsis, vol. lii. p. 71.

public halls, and the like places, where delicacy of ornaments seem less consistent: whereas the bold and gigantic manner of this order has a wonderful happy effect, and carries a certain manly and simple beauty, which forms properly what is called the grand manner.

II.—The Ionic Order.

After the appearance of these regular buildings, and famous Doric temples, architecture did not confine itself long to these first essays: the emulation of the neighbouring people soon enlarged and carried it to its perfection.¹ The

¹ Vitruv. *ibid.*

formed their public apartments. It is therefore not improbable, that these circumstances might suggest ideas to Callimachus, which would lead him to the composition of the Corinthian capital, which has, for two thousand years, been acknowledged to be the greatest ornament of this school of architecture.

The whole fabric of the Corinthian order is composed with great delicacy of taste, and is admirably fitted for highly ornamented edifices. It is, at the same time, a remarkable circumstance in the history of art among the Greeks, that in all their progress to magnificence and splendour, they appear not only never to have lost sight of the requisite simplicity of design, but that their improvements in this respect were more than commensurate with the increased decorations of their buildings. Thus, the Corinthian order, distinguished for the utmost richness and luxuriance of ornament in detail, is essentially the most simple in its general character, and affords the greatest facilities in its execution. The best specimens of it to be found are, the monument of Lysicrates, the Stoa, and arch of Adrian at Athens; the pantheon of Agrippa, and the three columns of the Campo Vaccino at Rome. It seems not to have been much employed in Greece before the time of the Roman conquest; but the Romans employed it extensively in every part of their empire; and it is accordingly in edifices constructed under their influence that the most perfect specimens of it are to be found.

Temples appear to have been the only property which the turbulent states of Greece could agree to have in common, and this union enabled them to construct edifices of great magnitude and splendour. They had many of this description built and maintained at the expense of confederated states, and even of all Greece: such were those at Delphi, Delos, Ephesus, Olympia, Eryx, &c. These temples had territorial revenues, and were enriched by private donations. The value attached to works of this nature, may be judged of from the city of Ephesus refusing to inscribe the temple of Diana with the name of Alexander the Great, although this prince offered to purchase that honour by defraying the whole expense attending its erection; and from the Athenians rejecting a like offer from Pericles, with regard to the splendid and extensive edifices with which he had ornamented Athens.

The dwelling of a Greek noble usually consisted of two courts, and several ranges of buildings. The porter's lodge, if the name may be allowed, was on the right hand of the entrance, and opposite to it were the stables. From this entrance one came into the first or smaller court. This had piazzas on three sides; and on the fourth, which was usually the south side, there were but-

Ionians were the first rivals of the Dorians; and as they had not the honour of the invention, they endeavoured to refine upon the authors. Considering, therefore, that the form of a man, such for example as Hercules was, from which the Doric order had been formed, was too robust and heavy to agree with sacred mansions, and the representation of heavenly things, they composed one after their own manner, and chose a model of a more delicate and elegant proportion, which was that of a woman, having more regard to the beauty than the solidity of the work, to which they added abundance of ornaments. Amongst the celebrated temples

ments of pilasters which supported the more inward parts of the ceiling. A space being thus left between the one and the other, they had places for the lodgings of men and maid servants, and such as had the principal care of the house. Upon the same floor with these apartments, they had several regular apartments, consisting of an antichamber, a chamber, and closets; and about the piazzas, rooms for eating and other common purposes. Opposite to the entrance was a lobby or vestibule, through which lay the passage into the several rooms; and through this, in front, one entered a large passage, which led into the larger or principal square. Round this, they had four piazzas, which, in the common way of building, were all of one height; but, in more magnificent houses, they made that which faced the great entrance loftier, and every way nobler, than the other three. A nobleman of Rhodes added this to the common method of building; and it was thence called the *Rhodian* manner. In this more noble part of the building were the apartments of the family. These were adorned with lofty galleries, and here were the best rooms: they were called the men's apartments; for, in rude times, the Greeks lodged their wives and female relations in the best rooms of the first court, where they had also their separate and detached place. The two sides of this larger court were kept for the reception of visitors. The master of the house is said to have entertained his guests the first day in his own apartments; but after this, how long soever they staid, they lived without restraint in one of those separate piazzas, and joined the family only when they chose. Thus was the upper end and two sides of the great court disposed of; and its lower end, being the same range of building that was the upper end of the first court, held the lady of the house and her female friends.

The Greeks appear to have made the greatest progress, and constructed the most magnificent of their edifices, during a period of time commencing with the age of Solon and Pythagoras, and ending with that of Pericles, being about 300 years. The Greek architecture prevailed in the countries where that people extended their influence along the coast of Asia. Alexander and his successors introduced it into Egypt, and probably in the cities he built on his route to India. To the westward, it spread as far as Sicily, Italy, and the south of France. After the time of Alexander, the Greek manners were blended with those of Asia. The sublime spirit of independence which had hitherto exalted their character, and rendered them capable of unparalleled exertions, if not quite subdued, became deeply contaminated; and although they long continued to be the instructors of their Roman conquerors, it is from this era that the declension of the pure Greek architecture may be dated.—Ed.

built by the people of Ionia, the most memorable, though the most ancient, is the famous temple of Diana at Ephesus, of which I shall soon speak.

III.—The Corinthian Order.

The Corinthian order, which is the highest degree of perfection architecture ever attained, was invented at Corinth. Though its antiquity be not exactly known, nor the precise time in which Callimachus lived, to whom Vitruvius gives the whole glory of it, we may judge, however, from the nobleness of its ornaments, that it was invented during the magnificence and splendour of Corinth, and soon after the Ionic, which it much resembles, except only in the capital or chapter. A kind of chance gave birth to it. Callimachus having seen, as he passed by a tomb, a basket, which had been set upon a plant of Acanthus or bearsfoot, was struck with the accidental symmetry and happy effect produced by the leaves of the plant, growing through and encircling the basket; and though the basket with the Acanthus had no natural relation to the capital of a column and a massy building, he imitated the manner of it in the columns he afterwards made at Corinth, establishing and regulating by this model the proportions, and ornaments of the Corinthian order.¹

This Callimachus was called by the Athenians, καλλιτέχνης, expert and excellent in art, from his delicacy and address in cutting marble: and according to Pliny and Pausanias,² he was also called καλλιόργιος, because he was never contented with himself, and was always retouching his works, with which he was never entirely satisfied: full of superior ideas of the beautiful and the grand, he never found the execution sufficiently equal to them; *semper calumniator sui, nec finem habens diligentia*, says Pliny.

IV.—The Tuscan Order.

The Tuscan order, according to the general opinion, had its origin in Tuscany, of which it retains the name. Of all the orders it is the most simple, and has the fewest ornaments. It is even so gross, that it is seldom used except for some rustic building, wherein there is occasion only for a single order, or at best for some great edifice, as an amphitheatre, or other works of the like kind.

In Mr. Chambrai's judgment the Tuscan

column, without any architrave, is the only one that deserves to be used; and to confirm his opinion of this order, he cites an example of it from Trajan's pillar, one of the most superb remains of Roman magnificence now in being, and which has more immortalized that emperor, than all the pens of historians could have done. This mausoleum, if it may be called so, was erected to him by the senate and people of Rome, in acknowledgment of the great services he had done his country. And that the memory of them might subsist throughout all ages, and endure as long as the empire, they caused them to be engraven in marble, and in the richest style that ever was conceived. Architecture was the writer of this ingenious kind of history: and because she was to record a Roman, she did not make use of the Greek orders, though incomparably more perfect, and more used even in Italy than the two others of their own growth; lest the glory of that admirable monument should in some measure be divided, and to show at the same time, that there is nothing so simple to which art cannot add perfection. She chose therefore the column of the Tuscan order, which till then had been only used in gross and rustic things, and made that rude mass bring forth the choicest and most noble masterpiece of art in the world, which time has spared and preserved entire down to us, amidst the infinity of ruins with which Rome abounds. And indeed it is a kind of wonder to see that the Coliseum, the theatre of Marcellus, the great Circuses, the baths of Dioclesian, Caracalla, and Antoninus, the superb mole of Adrian's burying place, the Septizonium of Severus, the Mausoleum of Augustus, and so many other structures, which seemed to be built for eternity, are now so defaced and ruinous, that their original form can scarce be discerned, whilst Trajan's pillar, of which the structure seemed far less durable, still subsists entire in all its parts.

V.—The Composite Order.

The composite order was added to the others by the Romans. It participates and is composed of the Ionic and Corinthian, which occasioned its being called the Composite: but it has still more ornaments than the Corinthian. Vitruvius, the father of the architects, says nothing of it. Mr. Chambrai objects strongly against the bad taste of the modern Compositors, who, amidst so many examples of the incomparable architecture of the Greeks, which alone merits that name, abandoning the guidance of those great masters, take a quite different route, and blindly give into that bad taste of art, which has by their means crept into the orders under the name of Composite.

¹ Vitruv. l. iv. c. l.

² Plin. l. xxxiv. c. 9. Pausan. l. i. p. 48.

Gothic Architecture. *

That which is remote from the ancient proportions, and is loaded with chimerical ornaments, is called the Gothic architecture, and was brought by the Goths from the north.

There are two species of Gothic architecture; the one ancient, the other modern. The ancient is that which the Goths brought from the north in the fifth century. The edifices built in the ancient Gothic manner were massy, heavy, and gross. The works of the modern Gothic style were more delicate, easy, light, and of an astonishing boldness of workmanship. It was long in use, especially in Italy. It is surprising, that Italy, abounding with monuments of so exquisite a taste, should quit its own noble architecture, established by antiquity, success, and possession, to adopt a barbarous, foreign, con-

fused, irregular, and hideous manner. But it has made amends for that fault, by being the first to return to the ancient taste, which is now solely and universally practised. The modern Gothic continued from the thirteenth century till the re-establishment of the ancient architecture in the fourteenth. All the ancient cathedrals are of Gothic architecture. There are some very ancient churches built entirely in the Gothic taste, that want neither solidity nor beauty, and which are still admired by the greatest architects, upon account of some general proportions remarkable in them.

A plate of the five orders of architecture, of which I have spoken, will enable youth, whom I have always in view, to form some idea of them. I shall prefix to it an explanation of the terms of art, which Mr. Camus, fellow of the Academy of Sciences, and professor and secretary of the

3 As this style of architecture belongs to a period comparatively modern, it does not fall within the design of this work to enter into any historical details respecting it. It has not been correctly ascertained among what people it originated; but it began to be employed in ecclesiastical edifices about the time the Goths invaded Italy, and continued to be practised till the sixteenth century, when it was supplanted by the revival of the Roman style. It was only at this time that the appellation of *Gothic* was applied to it, in token of the contempt in which it was held by the school of Palladio in Italy, and Jones in England. After the expiration of about two centuries, it has been again revived, and the excellence of its principles and beauty of its forms have become the subjects of discussion and admiration among men of science and taste.

The Gothic architecture differs widely from the Grecian, both in construction and appearance. In the Grecian, the adjustment of materials depended on their strength in large masses, which needed only to be arranged in neat forms of simple contrivance. The Gothic, on the contrary, with small sand stones, and other materials which a Greek artist would have conceived useless, produced structures of equal strength and perhaps greater magnificence, depending, not on perpendicular pressures, or the strength of lintels from pillar to pillar, but on the correct adjustment of the bearings and thrusts of different arches operating in various directions. In appearance, again, this style is easily distinguished from both Greek and Roman, by its slender shafts and clustered pillars, its circular, pointed, or angular arches, and groins, its spires and pinnacles, and the variety, number, and minuteness of its decorations.

Many theories have been proposed respecting the origin of Gothic architecture; and although we necessarily abstain from entering into the subject, it may not be improper to notice the ingenious theory of Sir James Hall, of Edinburgh, which claims the merit of comprehending every part of the style whose origin it undertakes to demonstrate, and is, besides, supported by history and experiment. In his theory, it is conceived that the forms of Gothic architecture may have been derived from the imitation of a rustic dwelling, constructed as follows:—Thrust two rows of posts into the ground opposite to each other, at an interval equal to that between the posts in the rows themselves, each post rising to the height of about three of those intervals. Then apply to

each post a set of slender rods of willow, thrusting them into the ground at its base, and tying them in two places, one a little above the ground, and the other within about a third part of the height, leaving them loose from this point upwards, so that they may be freely used in any direction. The rods may be three in number to each of the outside corner posts, and five to each of the others, all being placed so as to cover the inside of the posts, and give it the appearance of a bundle of rods. It will be easy now to form the skeleton of a thatched roof. For this purpose, let a rod from each of two opposite posts be bent at its loose top, so that they may cross each other, which gives us the form of a pointed arch; and the same being done throughout the whole extent of the two opposite rows, a horizontal rod, or ridge-bar, being at the same time placed along the points of crossing, we have the appearance of a Gothic arcade. Two rods from each post in the same row are now to be treated in like manner, so as to form similar arches in both rows, and these are also to be connected by ridge-bars crossing the longitudinal one. Having now employed two rods of each corner post, and three of each intermediate one, there still remain one in the former, and two in the latter, which may be disposed of by causing them to pass diagonally from the corners of each rectangle, not crossing as in the former cases, but applied, side by side, so as to form a continued hoop or semicircle. In this manner all the rods are occupied, and a frame is produced capable of supporting thatch or other covering. From the imitation of a dwelling so constructed, the three leading characters of Gothic architecture may be traced—the pointed arch, the clustered column, and the branching roof.*

The peculiarities of Gothic windows, doors, spires, &c., are accounted for by the ingenious baronet on similar principles; and he has constructed a small building in this way, and with such materials, possessing, in miniature, all the features of the Gothic style. But the historical evidence adduced, that some such edifices were erected in former times for sacred purposes, will probably influence the judgments of most readers in favour of the theory, more than all the acute reasoning and feasible conjectures by which it is supported.—*Ed.*

* See Transactions of the Royal Society of Edinburgh, vol. iv.; and Essay on the Origin, Principles, and History of Gothic Architecture, by Sir James Hall, Bart. 4to.

Academy of Architecture, was pleased to draw up expressly for my work. At my request he abridged it very much, which makes it less complete than it might otherwise have been.

SECT. III.

Explanation of the terms of art, relating to the Five Orders of Architecture.

Amongst the Greeks, an order was composed of columns and an entablature. The Romans added pedestals under the columns of most orders to increase their height.

The *Column* is a round pillar, made either to support or adorn a building.¹

1 Besides columns, the Greeks sometimes supported their entablatures by human figures. When these represented males, they were named *Persians*, out of contempt for their nation: and to represent them in the most afflicting state possible, they were generally loaded with the heaviest entablature, namely, that of the Doric order. When the form was feminine, they were called *Caristides*, says Vitruvius, * as a mark of disgrace to the inhabitants of Caria, who, in one of the wars with the Athenians, were totally vanquished, and whose wives were led away captive. Whether the Greeks invented this mode, or copied it from the edifices of Upper Egypt, or the temples or tombs of India or Persia, it would be in vain to inquire. Various fragments of male figures are also met with amongst Roman antiquities, whose attitudes and accompaniments are evidence of their having been employed for like purposes. Something similar to these are the *Termini*, a kind of half human form, no way more comfortably disposed of. They derive their origin from stones employed to mark the boundaries of property. To render these inviolable, Numa Pompilius consecrated them, and built a temple to Terminus on the Tarpeian rock. This deity was at first represented only by a large stone, but in process of time the top of it was cut into the form of a human head and shoulders, and the lower part into the shape of a sheath or inverted frustrum of a square pyramid, which has continued to be the general form, except that sometimes feet are added. They are employed chiefly as ornaments in gardens, or at the side of chimney-pieces.

Pilasters differ only from columns in being square or flat, instead of round. Their bases, capitals, and entablatures, have the same parts, with the same heights and projections, as those of columns, and they are distinguished in the same manner by the names of Tuscan, Doric, Ionic, Corinthian, and Composite. They are probably of Roman origin; there being few Grecian buildings, and those of the latter ages, (except the monument of Thrasyllus) in which they are repeated at regular intervals, as in the monument of Philopappus; but of their application in Roman works there are numerous instances. Vitruvius calls them *parastate*. But though the earlier architects of Greece were either un-

Every column, except the Doric, to which the Romans give no base, is composed of a base, a shaft, and a capital or chapter.

The *Base* is that part of the column, which is beneath the shaft, and upon the pedestal, when

acquainted with the use of pilasters, or refused to introduce them in their designs, they frequently placed a kind of square pillars at the end of their walls, which they called *antæ*, and which sometimes projected to a considerable distance from the principal front, forming the *pronaos* or *vestibulum*. The breadth of these *antæ* was always much less on the flanks of temples than on the front; and sometimes they had columns between them, in which case the return within the *pronaos* was of equal breadth with the front. The capitals of the *antæ* never correspond with those of the columns, though they always retain some characteristic marks by which the order may be distinguished.

Attics may properly be noticed after pilasters, being nothing more than low square pillars with their cornices. They had their origin in Athens, where it was for many ages a rule in building to conceal the roof. For this purpose nothing served so well as a kind of little order ranged in a continued line, singly, or with the interruption of *balustrades*, which, rising above the rest of the work, and before the roof, hid it completely, and placed something agreeable in view. No remains of attics are now to be discovered among the ruins of the ancient city of Athens. Roman attics are to be seen in the remains of the triumphal arches, and in the piazza of Nerva. In the arch of Constantine, the columns are surmounted with pedestals, as high as the base of the attic, upon which are placed insulated statues. At Thessalonica, there is an attic over a Corinthian colonnade, which breaks, forming dwarf pilasters over the columns, as in the arch of Constantine. The attic which is carried round the two courts of the great temple of Balbec is also broken into dwarf pilasters over the columns and pilasters of the order, which dwarf pilasters are surmounted with blocking courses, wherein statues are supposed to have stood. In all these remains, the attics are disproportional, some of them being nearly one half of the height of the order. The moderns make their height equal to that of the entablature.

Colonnade signifies a series of columns, separate or connected, used in the support of an entablature, and has its specific name from the number of columns, as *tetrastyle*, when there are four; *hexastyle*, when six; *octastyle*, when eight; and *decastyle*, when ten. *Intercolumniation* is the name given to the space between columns. It has been divided into five species, namely, the *arastyle*, or thinly set, when the columns are at the distance of four diameters; the *diastyle*, when they are at three diameters; the *eustyle*, when at two and a quarter; the *hypostyle*, when at two; and the *picnostyle*, or thickly set, when at the distance of one diameter and a half. Of those, the *eustyle* was most generally used by the ancients. Other denominations have been applied to the intervals in the Doric order, taken from the number of the triglyphs which were placed over them, as *monotriglyph*, when only one, *ditriglyph*, when two, &c.

Coupled, grouped, or clustered columns, seem not to have been used by the ancients. In the temple of Bacchus, at Rome, indeed, columns are found standing in some sort in pairs; but it must be observed, that each pair is only placed in the thickness of the wall, and not in the front; wherefore, they may be called two rows of distinct columns, one almost immediately behind the other, rather than a coupled row.—Ed.

* The origin of these appellations, given by Vitruvius, are equally questionable with some of his idle traditions respecting the invention of the different orders of architecture. As the female figures have no symbols of disgrace or subjection attached to them, there is every reason to believe that they were intended to represent the Canephora, who were selected for the solemnities of the Panathenæan festival from the most distinguished families in Athens.

there is any. It has a plinth, of a flat and square form like a brick, called in Greek *σκάκι*; and mouldings, that represent rings, with which the bottom of pillars were bound, to prevent their cleaving. These rings, when large, are called *Torus*, and when small, *Astragals*. The Tori generally have hollow spaces cut round between them, called *Rundels*, *Scotia* or *Trochylus*.

The *Shaft* of the column is the round and even part extending from the base to the capital. This part of the column is narrower at top than at bottom. Some architects are for giving the column a greater breadth at the third part of their height, than at the bottom of their shaft. But there is no instance of any such practice amongst the ancients. Others make the shaft of the same size from the bottom to the third, and then lessen it from the third to the top. And some are of opinion, that it should begin to lessen from the bottom.

The *Capital* is that upper part of the column which is placed immediately upon the shaft. The *Entablature* is the part of the order above the columns, and contains the architrave, the frieze, and the cornice. The *Architrave* represents a beam, and lies next immediately to the capitals of the columns. The Greeks call it *Epistyle*, *Ἐπιστύλιον*. The *Frieze* is the space between the architrave and the cornice. It represents the ceiling of the building. The *Cornice* is the beginning of the whole order. It is composed of several mouldings, which projecting over one another, serve to shelter the order from the waters of the roof. The *Pedestal* is the lowest part of the order.² It is a square body, containing three parts: the *foot*, which stands on the area or pavement; the *die*, that lies upon the foot; and the *wave* (cymatium) which is the cornice of the pedestal upon which the column is placed.

Architects do not agree among themselves about the proportion of the columns to the entablature and pedestals. In following that of Vignola, when an order with pedestals is to be

made to a height given, the height must be divided into nineteen equal parts, of which the column, with its base and capital, is to have twelve, the entablature three, and the pedestal four. But if the order is to have no pedestal, the height given must be divided into fifteen parts only, of which the column is to have twelve, and the entablature three. It is by the diameter of the bottom of the shaft of the columns, that all the parts of the orders are regulated. But this diameter has not the same proportion with the height of the column in all the orders. The semidiameter of the bottom of the shaft is called *module* or *model*. This model serves as a scale to measure the smaller parts of the orders. Many architects divide it into thirty parts, so that the whole diameter contains sixty, which may be called *minutes*.

The difference between the relation of the heights of columns to their diameters, and between their bases, capitals, and entablatures, forms the difference between the five orders of architecture. But they are principally to be distinguished by their capitals; except the Tuscan, which might be confounded with the Doric, if only their capitals were considered. The Doric and Ionic pillars have in their capitals only mouldings in the form of rings with a flat square stone over them, called *Plinth* or *Abacus*. But the Doric is easily distinguished from the Tuscan by the frieze. In the Tuscan order, the frieze is plain, and in the Doric adorned with *Triglyphs*, which are long square rustics, not unlike the ends of several beams which project over the architrave to form a roof or ceiling. This ornament is affected by the Doric order, and is not to be found in the others. The Ionic capital is easily distinguished by its *volute*, ears, or spiral rolls, projecting underneath the plinth or abacus. The Corinthian capital is adorned with two rows of eight leaves each, and with eight small volutes, which project between the leaves. And lastly, the Composite capital is compounded from the Corinthian and Ionic capitals. It has two rows of eight leaves, and four great volutes, which seem to project under the abacus.

To relate at large all the particularities affected by the different orders, it would be necessary to expatiate upon particulars much more than is consistent with the plan of my work. Mr. Buache, fellow of the Academy of Sciences, has given himself the trouble to trace the plan of the five orders of architecture in the plate annexed.

ARTICLE II.

Of the Architects and Buildings most celebrated by the ancients.

I can only touch very lightly upon this subject, which would require whole volumes to

² The use of pedestals appears to have been an innovation subsequent to the loss of political independence in Greece. In the original examples of Grecian architecture (with the exception of the temple of Theseus, at Athens, which has but two steps) the columns are found standing on the uppermost of three steps. The Romans, however, when they raised the floors of their temples and other edifices high, were under the necessity of discontinuing the front stairs, lest they should prove inconvenient by occupying too much ground around the building, and of adopting the pedestal or podium, raised to a level with the top of the stairs, and projecting to the front of the steps which profiled on its sides. Vitruvius, in treating of the Doric, Tuscan, and Corinthian orders, makes no mention of a pedestal; and in treating of the Ionic, speaks of it as a necessary part of the construction, but not as a part of the order.—Ed.

treat it in its extent; and shall make choice of what seems most proper to inform the reader, and satisfy his just curiosity, without excluding what the Roman history may supply, as I have before observed.

The holy scripture,¹ in speaking of the building of the tabernacle, and afterwards of the temple of Jerusalem that succeeded it, tells us one circumstance highly to the honour of architecture, which is, that God vouchsafed to be the first architect of those two great works, and traced the plans of them himself with his own divine hand, which he afterwards gave to Moses and David, to be the models for the workmen employed in them. This was not all. That the execution might fully answer his designs, "he filled Bezaleel with the Spirit of God,"² whom he had appointed to preside in building the tabernacle; that is to say, in the express words of the scripture, "he had filled him with the Spirit of God in wisdom, and in understanding, and in knowledge, and in all manner of workmanship; to devise cunning works; to work in gold, and in silver, and in brass; and in cutting of stones to set them, and in carving of timber, to work in all manner of workmanship." And he joined Aholiab with him, "whom he had filled with wisdom as well as all the other artisans, that they may make all that I have commanded thee." It is said in like manner, that Hiram, who was employed by Solomon in building the temple, "was filled with wisdom, and understanding, and cunning, to work in all works of brass."³ The words I have now quoted, especially those from Exodus, show that the knowledge, skill, and industry of the most excellent workmen is not their own, but the gift of God, of which they seldom know the origin, and make the use they ought. We must not expect to find such purity of sentiments amongst the Pagans, of whom we have to speak.

I shall pass over in silence the famous buildings of Babylonia and Egypt, that I have mentioned more than once elsewhere, and in which brick was used with so much success. I shall only insert here a remark from Vitruvius, that has some relation to them. This excellent architect observes,⁴ that the ancients in their buildings made most use of brick, because brick-work is far more durable than that of stone.⁵ Hence

there were many cities, in which both the public and private buildings, and even the royal palaces, were only of brick. Amongst many other examples, he cites that of Mausolus, king of Caria. In the city of Halicarnassus, says he, the palace of the potent king Mausolus is walled with brick, though universally adorned with the marble of Proconnesus; and those walls are still⁶ very fine and entire, cased over with a plaster as smooth as glass. It cannot however be said, that this king could not build walls of more costly materials, who was so powerful, and at the same time had so great a taste for fine architecture, as the superb buildings, with which he adorned his capital, sufficiently prove.

Temple of Ephesus.

The temple of Diana of Ephesus was deemed one of the seven wonders of the world.⁷ Ctesiphon or Chersiphron (for authors differ in the name) made himself very famous by building this temple. He traced the plans of it, which were partly executed under his own direction, and that of his son Metagenes; and the rest by other architects, who worked upon it after them, for the space of two hundred and twenty years,

6 Vitruvius lived 350 years after Mausolus.

7 Plin. l. xxxvi. c. 14.

buildings were five spans each way; those of the middle class were four spans; and the smallest, called by Vitruvius, *Diodori*, and by Pliny, *Lydiæ*, were two spans long and a foot broad. The Greeks, however, most usually made use of white marbles, as Pentellic, Parian, and that of Chian. The latter was very transparent. The Romans employed many sorts of marble of various colours, procured from their different provinces in Asia, Africa, and Europe.* The ancients frequently included under the term marble all hard stones which would receive a smooth fine polish. Alabaster resembled marble in taking a smooth fine polish; but it is much softer and more easily worked. Gypseous alabaster, when polished, is slippery to the touch: it was procured from Upper Egypt between the Nile and Red Sea, also from Syria and Carmania. The calcareous alabaster is white, yellow, red, and bluish gray, with a striated or fibrous fracture: Italy and Spain produce the best. Three kinds of sand are mentioned by Vitruvius as used in building—pit, river, and sea sand. Of these, pit sand was reckoned the best; the white was preferred to the black or red coloured, and the carbuncle to all. Of the river sand, that was considered best which was found near torrents. The least value was put upon sea-sand, and it was required to be well washed, to dissolve the saline matter, before used in plastering or rough-casting walls. Lime for plastering walls was made from shells, river pebbles, or a sort of pumice-stone. The best sort of lime was accounted that made from white stone, which was dense and hard, and lost one-third of its weight in burning in a kiln, where it was kept about sixty hours. Their mortar was composed of one part lime and three of pit or two of river sand.—*Ed.*

* See Note under SCULPTURE, headed "*Materials of Sculpture*," where various kinds of marble are enumerated.

¹ Exod. xxv. 8, 9. 1 Chron. xxviii. 19.

² Exod. xxxi. 3—6. 3 1 Kings vii. 14.

⁴ Vitruv. l. ii. c. 8.

⁵ Vitruvius must here be understood as referring to a certain stone of a particular softness. Of bricks the ancients used, first, an unburned kind, which were mixed with chopped straw and dried five years in the sun; and, second, a kind burned by fire after having been made two years. The Greeks proportioned the size of the bricks to the nature of the edifice: the largest for public

which that superb edifice took up in building. Ctesiphon worked before the 60th Olympiad, A. M. 3464. Vitruvius says,⁸ that the form of this temple is *dipterych*, that is to say that it was surrounded with two rows of columns in form of a double portico. It was almost one hundred and forty-two yards in length, and seventy-two in breadth. In this edifice there were an hundred and twenty-seven columns of marble sixty feet high, given by as many kings. Thirty-six of these columns were carved by the most excellent artists of their times. Scopas, one of the most celebrated sculptors of Greece, finished one of them, which was the finest ornament of this magnificent structure. All Asia had contributed with incredible ardour to the erecting and adorning it.

Vitruvius relates the manner of getting the marble for this pile.⁹ Though the account seems a little fabulous, I shall however repeat it. A shepherd, named Pyxodorus, often drove his sheep to feed in the country about Ephesus, at the time, when the Ephesians proposed to bring the marble that was necessary for building the temple of Diana from Paros, Proconnesus, and other places. One day, whilst he was with his flock, it happened, two rams that were fighting, missed each other in their career, and one of them hit his horns so violently against a rock, that he struck off a piece of it, which seemed so exquisitely white to the shepherd, that immediately leaving his flock upon the mountain, he ran with that splinter to Ephesus, at that time in great difficulty about the importation of marble. Great honours were instantly decreed him. His name Pyxodorus was changed into Evangelus, which signifies the messenger of good news; and to this day, adds Vitruvius, the magistrate of the city goes every month to sacrifice upon the spot; and in case he fails to do so, is subject to a severe penalty.

It was not sufficient to have found marble: it was necessary to remove it into the temple, after being worked upon the spot, which could not be executed without difficulty and danger. Ctesiphon invented a machine, which very much facilitated the carriage of it.¹⁰ His son Metagenes invented another for carrying the architraves. Vitruvius has left us the description of both these machines.

The same Vitruvius informs us,¹¹ that Demetrius, whom he calls the servant of Diana, *servus Diana*, and Pæonius the Ephesian, finished the building of this temple, which was of the Ionic order. He does not precisely mark the time, when these two architects lived.

The frantic extravagance of a private man

destroyed in one day the work of two hundred years. Every body knows, that Hierostratus, to immortalize his name, set fire to this famous temple, and consumed it to ashes. This happened on the day Alexander the Great was born; which suggested the frigid conceit to an historian, that Diana was so busy at the labour of Olympia, that she could not spare time to preserve her temple. The same Alexander, who was insatiably fond of every kind of glory, offered afterwards to supply the Ephesians with all the expenses necessary for the rebuilding of their temple, provided they would consent, that he should have the sole honour of it, and that no other name should be added to his in the inscription upon it. The Ephesians did not approve this condition: but they covered their refusal with a flattery, with which that prince seemed satisfied, in answering him, That it was not consistent for one god to erect a monument to another. The temple was rebuilt with still greater magnificence than the first.

Buildings erected at Athens,¹² especially under Pericles.

I should never have done, if I undertook to describe all the famous buildings with which

¹² Athens was situated on the Saronic gulf, opposite the eastern coast of Peloponnesus. It was enclosed in a sort of peninsula, formed by the confluence of the Cephissus and the Ilissus. In the centre of the city itself, and constituting its chief ornament, stood the Acropolis, the glory of Grecian art. On this elevation the whole of Athens was originally built; but as the city extended the Acropolis came to serve merely the purpose of a citadel. Here, as in the safest and most conspicuous situation, were accumulated all those works of ornament for which Athens was so prolific. The Acropolis became the grand depository of painting, sculpture, and architecture. Its chief ornament was the Parthenon, or virgin temple of Minerva. Destroyed by the Persians, it was rebuilt by Pericles, with great additional splendour. It would be superfluous to expatiate on the beauties of the Parthenon, which are so well known, and have been so often described. In the majestic simplicity of its general design, the grandeur of its proportions, and the exquisite taste and skill displayed in the execution of its ornamental parts, it is undoubtedly the most perfect, as well as deservedly the most celebrated production of Grecian art. The Propææa, of white marble, formed a magnificent entrance to the Parthenon. This edifice was on the north side of the Acropolis, and near it was the Erechtheum, also of white marble, consisting of two temples, one of Minerva Polius, another of Neptune, besides a remarkable edifice called the Pandroseum. In front of the Acropolis, and at each end, were two theatres, called the theatre of Bacchus and the Odeum—the one designed for dramatic representations, and the other for music. Both, and particularly the last, were of extraordinary magnificence.

The city itself, although the principal treasures of Athenian art were accumulated in the Acropolis, contained many noble structures. Among these may be mentioned the Pææia; the Tower of the Winds, &c.

⁸ Vitruv. l. iii. c. i.

⁹ Ibid. l. x. c. 7.

¹⁰ Ibid. l. x. c. 6.

¹¹ In præf. l. vii.

the city of Athens was adorned. I shall place the Piræum at the head of the rest, because that port contributed most to the grandeur and power of Athens. Before Themistocles, it was a simple hamlet, the Athenians at that time having no port but Phalerus, which was very small and inconvenient.¹ Themistocles, whose design was to make the whole force of Athens maritime, rightly observed, that to accomplish a design truly worthy of so great a man, it was necessary to provide a secure retreat for a very considerable number of ships. He cast his eyes upon the Piræum, which by its natural situation afforded three different ports within the same enclosure. He immediately caused it to be worked upon with the utmost despatch, took care to fortify it well, and soon put it into a condition to receive numerous fleets. This port was about two leagues (forty stadia) from the city; an advantageous situation, as Plutarch observed, for removing from the city the licentiousness which generally prevails in ports. The city might be supported by the Piræum, and the Piræum by the city, without prejudice to the good order it was necessary to observe in the city. Pausanias mentions a great number of temples, which adorned this part of Athens, that in a manner formed a second city distinct from the first.

Pericles joined these two parts by the famous wall, that extended two leagues, and was the beauty and security of both the Piræum and the city: it was called the *long wall*. Demetrius Phaleræus, whilst he governed Athens, applied himself particularly in fortifying and embellishing the Piræum.² The arsenal built at that time, was looked upon as one of the finest pieces

of work Greece ever had. Demetrius gave the direction of it to Philo, one of the most famous architects of his time. He discharged that commission with all the success which could be expected from a man of his reputation. When he gave an account of his conduct in the public assembly, he expressed himself with so much elegance, perspicuity, and precision, that the people of Athens, excellent judges in point of eloquence, conceived him as fine an orator as he was an architect, and admired no less his talent for speaking than his ability for building.³ The same philosopher was charged with the alterations it was thought proper to make in the magnificent temple of Ceres and Proserpine at Eleusis, of which I shall soon speak.⁴

To return to Pericles, it was under his equally long and glorious government, that Athens, enriched with temples, porticoes, and statues, became the admiration of all the neighbouring states, and rendered herself almost as illustrious by the magnificence of her buildings, as she was for the glory of her military exploits.⁵ Pericles finding her the depository and dispenser of the public treasures of Greece, that is to say, of the contributions paid by the several states, for the support of troops and fleets, believed, after having sufficiently provided for the security of the country, that he could not employ the sums that remained to better purpose, than to adorn and improve a city, that was the honour and great defence of all the rest.

I do not examine here whether he were in the right or not; for this conduct was imputed to him as a crime; nor whether this use of the public money was conformable to the intention of those who supplied it: I have said elsewhere what we ought to think of it; and content myself with observing, that a single man inspired the Athenians with a taste for all the arts; that he set all the able hands at work, and raised so lively an emulation amongst the most excellent workmen in every kind, that solely intent upon immortalizing their names, they used their utmost endeavours, in all the works confided to their care, to surmount each other, and surpass the magnificence of the design by the beauty and spirit of the execution. One would have believed, that there was not one of those buildings but must have required a great number of years, and a long succession of men, to complete it: and yet, to the astonishment of every body, they were all carried to so supreme a degree of per-

¹ Cor. Nep. in Themist. c. vi. Plut. in Themist. p. 121. Thueyd. c. i. p. 62. Pausan. l. i. p. 1, &c.

² Cic. l. i. de orat. n. 62.

Andronicus Cyrrhestes; and numerous monuments of illustrious men. Two of its most splendid monuments, however, were without the walls—namely, the temples of Theseus and of Jupiter Olympius, situated, the one on the north, and the other on the south side of the city. The temple of Jupiter Olympius was of the Corinthian order. Immense sums were spent upon it by the Athenians; additions were made to it by successive sovereigns; and the fabric was at length completed by Hadrian. The exterior contained about 120 columns, fluted, 60 feet in height, and 6 in diameter. The enclosure was about half a mile in circumference.

After all that time and barbarism have effected towards the devastation of Athens, her ruins still excite astonishment and admiration in every beholder. Of these, it would be impossible to give any adequate description in a limited note like the present; but we refer the reader particularly, to Messrs. Stuart and Rivett's work, entitled, "*Antiquities of Athens*," Lond. 1762, 4 vols. fol., which contains many magnificent plates calculated to illustrate the descriptions.—*Ed.*

³ Gloriantur Athenæ armamentario suo, nec sine causa: est enim illud opus et impensa et elegantia visendum. Cujus architectum Philonem ita facundè rationem institutionis sue in theatro reddidisse constat, ut disertissimus populus non minorem laudem eloquentiæ ejus, quam arti tribuerit. *Fal. Mar. l. viii. c. 12.*

⁴ Vitruv. l. vii. in præfat.

⁵ Plut. in Pericl. p. 156.

fection during the government of one man; and that too in no considerable number of years, considering the difficulty and excellency of the workmanship.

Another consideration, which I have already touched upon elsewhere, still infinitely exalts their value: I only copy Plutarch in this place, and should be very glad if I could come near the energy and vivacity of his expressions. Facility and expedition do not generally communicate solid and lasting graces, nor perfect beauty to works: but time, united with labour, pays delay with usury, and gives the same works a force capable of preserving, and of making them triumph, through all ages. This renders the works of Pericles the more admirable, which were finished in so short a time, and yet had so long a duration. For from the moment they came from the workman's hands, they had the beauty and spirit of antiques; and even now, says Plutarch, that is to say, about six hundred years after, they have the freshness of youth, as if but lately finished; so much do they still retain a bloom of grace and novelty, that prevents time itself from diminishing their beauty, as if they possessed within themselves a principle of immortal youth, and an animating spirit incapable of growing old.

Plutarch afterwards mentions several temples and superb edifices, in which the most excellent artists had been employed. Pericles had chosen Phidias to preside in erecting these structures. He was the most famous architect, and, at the same time, the most excellent sculptor and statuary of his times. I shall speak of him presently, when I come to treat the article of sculpture.

The Mausoleum.

The superb monument which Artemisia erected for her husband Mausolus, king of Caria, was one of the most famous buildings of antiquity, as it was thought worthy of being ranked amongst the seven wonders of the world. I shall cite, in the article upon sculpture, what Pliny says of it.

City and Light-house of Alexandria.

It is natural to expect, that whatever derives itself from Alexander, must have something great, noble, and majestic in it; which are the characters of the city he caused to be built, and called after his name, in Egypt. He charged Dinocrates with the direction of this important undertaking. The history of that architect is very singular.

He was a Macedonian. Confiding in his genius and great ideas, he set out for the army of Alexander, with design to make himself

known to that prince, and to propose views to him such as he conceived would suit his taste.⁶ He got letters of recommendation from his relations and friends to the great officers and leading men at the court, in order to obtain a more easy access to the king. He was very well received by those to whom he applied, who promised to introduce him as soon as possible to Alexander. As they deferred doing it from day to day, under pretence of wanting a favourable opportunity, he took their delays to imply evasion, and resolved to present himself. His stature was advantageous, his visage agreeable, and his address spoke a person of condition. Relying therefore upon his good mien, he stripped himself of his usual habit, anointed his whole body with oil, crowned himself with a wreath of poplar, and throwing a lion's skin over his shoulders, took a club in his hand, and in that equipage approached the throne, upon which the king sat dispensing justice. The novelty of the sight having opened his way through the crowd, he was perceived by Alexander, who, surprised at his appearance, ordered him to approach, and asked him who he was. He replied, "I am Dinocrates the Macedonian, an architect, who bring thoughts and designs to Alexander worthy his greatness." The king gave him the hearing. He told him, that he had formed a design of cutting mount Athos into the form of a man, that should hold a great city in his left hand, and in his right a cup to receive all the rivers, which ran from that mountain; and to pour them into the sea. Alexander relishing this gigantic design, asked him whether there were lands enough about this city to supply corn for its subsistence? And having been answered, that it would be necessary to bring that by sea, he told him that he applauded the boldness of the design, but could not approve the choice of the place he had pitched upon for the execution of it. He however retained him near his person, adding, that he would employ his ability in other undertakings.

Alexander accordingly in the voyage he made into Egypt, having discovered a port there, that was very well sheltered and of easy access, surrounded by a fertile country, and abounding with conveniences on account of its neighbourhood to the Nile, he commanded Dinocrates to build a city adjoining to it, which was called Alexandria after his name. The architect's skill, and the prince's magnificence vied with each other in embellishing it, and seemed to exceed themselves in order to render it one of the greatest and most superb cities of the world. It was enclosed within a vast extent of walls, and fortified with towers.⁷ It had a port, aque-

⁶ Vitruv. in præfat. l. ii.

⁷ Strab. l. xvii. p. 791, &c.

ducts, fountains, and canals of great beauty; an almost infinite number of houses for the inhabitants, squares, lofty edifices, public places for the celebration of games and shows; in a word, temples and palaces so spacious, and in so great a number, that they took up almost a third part of the whole city. I have observed elsewhere in what manner Alexandria became the centre of the commerce of the east and west.

A considerable structure, afterwards erected in the neighbourhood of this city, still rendered it more famous; I mean the light-house of the Island of Pharos. Seaports were usually fortified with towers, as well for their defence, as to guide those who sailed in the night by the means of fires kindled upon them. These towers were at first of a very simple species: but Ptolomæus Philadelphus caused one so great and magnificent to be erected in the Island of Pharos, that some have ranked it amongst the wonders of the world; it cost eight hundred talents, or one million eight hundred thousand livres.

The Isle of Pharos was about seven stadia or something more than a quarter of a league, from the continent.¹ It had a promontory or rock against which the waves of the sea broke. It was upon this rock Ptolomæus Philadelphus built the tower of Pharos of white stone, of surprising magnificence, with several arched stories not unlike the tower of Babylon, which had eight such stories. He gave the direction of this work to a celebrated architect called Sostratus, who cut this inscription upon the tower: "Sostratus of Cnidos, son of Dexiphanes, to the gods preservers, in favour of those who go by sea." In the history of Philadelphus, the reader may see what has been said upon this inscription.

The Nubian geographer, who lived about six hundred years ago, speaks of the tower of Pharos, as of an edifice subsisting in his time. The height of the tower according to him was three hundred cubits, that is to say, four hundred and fifty feet, or an hundred and fifty yards. A manuscript scholiast upon Lucian, cited by Isaac Vossius,² affirms, that for its size it might be compared with the pyramids of Egypt; that it was square, that its sides were almost a stadium, near two hundred and eight yards, that its top might be descried an hundred miles, or about thirty or forty leagues. This tower soon took the name of the island, and was called Pharos; which name was afterwards given to other towers erected for the same use. The isle on which it was built became a peninsula in process of time. Queen Cleopatra joined it to the main land by a mole, and a bridge from the

mole to the island: a considerable work, in which Dexiphanes a native of the Isle of Cyprus presided.³ She gave him by way of reward a considerable office in her court, and the direction of all the buildings she afterwards caused to be erected.

We find from more than one example, that expert architects were very much honoured and esteemed amongst the ancients. The inhabitants of Rhodes had settled a considerable pension upon Diognetus, one of their citizens, to reward him for the machines of war which he had made for them.⁴ It happened that a foreign architect, who called himself Callias, had made a model in miniature, of a machine capable, as he pretended, of lifting and removing any weight whatsoever, and thereby excelling all other machines. Diognetus, judging the thing absolutely impossible, was not ashamed to confess that it surpassed his skill. The pension of the latter was transferred to Callias, as far the more expert artist. When Demetrius Poliorcetes was preparing to make his terrible Helepolis approach the walls of Rhodes, which he besieged, the inhabitants called upon Callias to make use of his machine. He declared it to be too weak to remove so great a weight. The Rhodians then perceived the enormous fault they had committed, in treating a citizen to whom they had such great obligations with so much ingratitude. They beseeched Diognetus in the most earnest manner to assist his country, exposed to the utmost danger. He refused at first, and remained for some time inflexible to their entreaties. But when he saw the priests, and the most noble children of the city, bathed in their tears, come to implore his aid, he complied at last, and could not withstand so moving a spectacle. The question was to prevent the enemy's approaching their formidable machine to the wall. He effected it without much difficulty, having laid the land under water, over which the Helepolis was to pass, which rendered it absolutely useless, and obliged Demetrius to raise the siege, by an accommodation with the Rhodians. Diognetus was loaded with honours, and double his former pension settled upon him.

The four principal temples of Greece.

Vitruvius says,⁵ that there were amongst others four temples in Greece, entirely built of marble, and adorned with such exquisite ornaments, that they were the admiration of all good judges, and became the rule and model of buildings in the three orders of architecture. The first of these structures is the temple of

¹ Strab. l. xvii. p. 791, &c. Plin. l. xxxvi. c. 12.

² Is. Voss. ad Pomp. Met. p. 205.

³ Tzetzes Chil. ii. hist. 33.

⁴ Vitruv. l. x. c. 33.

⁵ Ibid. in pref. l. vii.

Diana at Ephesus. The second that of Apollo in the city of Miletus: both these were of the Ionic order. The third is the temple of Ceres and Proserpine at Eleusis, which Ictinus built in the Doric order, of extraordinary dimensions, capable of containing thirty thousand persons: for there were as many, and often more at the celebrated procession of the feast of Eleusis.⁶ This temple at first had no columns without, in order to leave the more room for the sacrifices. But Philo afterwards, when Demetrius Phaleræus governed Athens, placed some pillars in the front, to render the edifice more majestic. The fourth is the temple of Jupiter Olympius at Athens, of the Corinthian order. Pisistratus had begun it, but it remained unfinished after his death, upon account of the troubles in which the republic was involved.⁷ More than three hundred years after, Antiochus Epiphanes, king of Syria, took upon him to defray the expenses that were necessary for finishing the body of the temple, which was very large, and the columns of the portico.⁸ Cossutius, a Roman citizen, who had made himself famous amongst the architects, was chosen to execute this great work. He acquired great honour by it, this pile being esteemed to have very few equal to it in magnificence. The same Cossutius was one of the first amongst the Romans who built in the Grecian taste. He gives me occasion to speak of several edifices at Rome, which often employed Greek architects, and thereby in some measure to resume my plan.

*Celebrated buildings at Rome.**

The art of building was almost as soon known in Italy as Greece, if it be true, that the Tuscans

had not had any communication with the Greeks, when they invented the particular order, which retains their name to this day. The tomb which Porsenna, king of Etruria,

Rome; but in the consulship of Quintius Catullus, it is said, 100 marble temples were erected. Pompey erected a theatre, and Julius Caesar the temple of Apollo, the porticoes, library, and mausoleum. From this period the progress of architecture was rapid throughout the Roman empire.

The history of ancient Roman architecture has been divided into four eras, the boundaries of which are strongly marked. The first era commences with the kings, includes the infancy of the republic, and may be considered as extending to the destruction of the city by the Gauls. The architecture of this period was entirely Etruscan, and its characteristic qualities were solidity and grandeur, in both which features it resembled the Egyptian, with less gigantic but more graceful forms. The principal edifices of this age were of public utility or rather necessity, and their magnificence was the result and not the object of their destination. Of these, the Cloaca Maxima, and some massy traces of the foundations of the Capitol laid by Tarquinius Superbus, still remain. The second era commences with the restoration of the city, and extends to the fall of the commonwealth. Public utility was still the object, and grandeur still accompanied the progress of the art. The celebrated roads and aqueducts were its first productions, and even now continue its noblest monuments. A few simple and solid tombs, such as that of Caius Publicius, and that of the Scipios, with a few temples, such in particular as that of Fortuna Virilis, attest the same manly taste though on a smaller scale. Towards the termination of this period, the public temper, influenced by the luxuries and opulence of Asia, then flowing into the Republic, seemed to demand more splendour and ornament, and was gradually prepared for the magnificence and glory of the third and imperial era which opened with the reign of Augustus. While this prince was content, like other great popular leaders before him, to inhabit a plain unadorned mansion, he displayed his riches and magnificence in edifices devoted to public use. Nero was the first who ventured to expend the public treasures in the erection of an imperial residence, by building the celebrated palace, noticed in the text and the accompanying note; but his example was deemed opposite to the civil character affected by the earlier emperors, who, as Tacitus observes, satisfied with the reality, avoided the parade of power. Hence Vespasian ordered the palace to be destroyed, and he and his immediate successors, Titus and Domitian, erected on its site various edifices of less costliness perhaps, but of equal magnificence and greater utility; such as the temple of Peace, the Thermae, and the Flavian amphitheatre or Coliseum, &c. Forums, porticoes, thermae, triumphal arches, and mausoleums, still continued the favourite objects of imperial pride and expense, and Rome daily increased in beauty for the space of 300 years till the empire was divided under Diocletian, when the seat of the sovereign was translated to the east, and the capital of the world was abandoned to hostile attacks and rapacity. The most remarkable edifices erected during the fourth long era, first of declining taste and then of barbarism, were the churches, the principal of which were raised by Constantine, and the Christian emperors, on the model, and often with the very materials of the ancient Basilica. Of these some still remain, and display in their different appearances evidence of the greatness of manner that still survived, and also of the bad taste that too generally prevailed in

6 Her. l. iii. c. 65. Strab. l. ix. p. 305. 7 Vitruv. in præf. l. vii. 8 Liv. l. xli. n. 20.

9 Until the Romans had subjected all the nations, including Britain, to the west, Macedonia and a part of Persia to the east, and the northern parts of Africa to the south, they preserved the utmost simplicity of manners, and remained in a great measure ignorant of what are denominated the fine arts. Plutarch relates, that Marcellus brought the spoils of Sicily, consisting, in part, of the most valuable statues and paintings of Syracuse, on purpose to adorn his triumph, and ornament the city of Rome, which before his time had never known any curiosity of this kind; and he adds, that Marcellus took merit to himself for being the first who taught the Romans to admire the exquisite performances of Greece. But, even for some time after Marcellus had introduced specimens of Grecian art, and out of the spoils of Sicily built and embellished the temple of Virtue and Honour, it does not appear that any impression had been made upon the Roman people; and it was not till after the return of Sylla from the Mithridatic war, or 120 years after the triumph of Marcellus, that specimens of fine building can be distinguished. It was only 50 years previous to this that an edifice of marble was first erected at

caused to be erected for himself during his lifetime, shows the great knowledge they had in those days of this art.¹ This structure was of stone, and built almost in the same manner as

the labyrinth of Dædalus in the Island of Crete, if the tomb were such as Varro has described it in a passage cited by Pliny.

Tarquinius Priscus had a little before erected

1 Plin. l. xxxvi. c. 13.

their respective ages. One of the most striking peculiarities of these edifices is the construction of arches over the pillars instead of a regular entablature, a deformity introduced a little before or during the reign of Diocletian, and adopted or rather imitated in our modern arcades.*

The Romans were so much indebted to the Greeks for all that relates to architecture and sculpture, that they have little claim to originality upon those subjects; but their power, wealth, and vanity led them to increase the number, magnitude, and decorations of their edifices to a degree far beyond those of Greece.† In the theatre of Marcellus and in the Coliseum, the Doric and Ionic were both introduced; but, with very few exceptions, the Corinthian order only was employed by the Romans; and, as if not left by the Greeks sufficiently expressive of riches and magnificence, they loaded every member with ornaments unknown to the inventors. They united the Ionic and Corinthian into an order they named the Composite; and stripping the Doric of its finest features, they formed their Tuscan. When the particular members could receive no more ornaments, they had recourse to varying the outlines of their structures (particularly their temples) into every shape that could be produced by the union of circles or triangles.

To one important feature, however, in architecture—the extensive appropriation of the arch in their buildings—the Romans appear to have an indubitable claim. Respecting the era of its invention nothing certain is known. Whether it was known to the early Egyptians and Greeks has never been satisfactorily ascertained; for, although several arches have been discovered among the ruins of ancient Egypt and Greece; it must be recollected that both these countries were long under Roman dominion, and none have been found the date of whose erection we know positively to have been before the time of Alexander. At all events, though the merit of the mere invention cannot be fully attributed to the Romans, they assuredly had the merit of introducing arches into general and extensive use, as in vaultings and domes, in triumphal arches, in constructing bridges over rivers, and in forming aqueducts for conveying water to cities. Although, for example, Pericles adorned the city of Athens with splendid edifices, it was left for the Romans to construct a stone arch, over the small river Cephissus, upon the most frequented road to that city.

The private houses of the early Romans were small; and the doors were left unclosed during the single meal that sufficed for the day, that it might be seen no one

exceeded the bounds of frugality prescribed by the laws. But as civilization advanced, and luxury was introduced, their size enlarged to the excess, that four hundred slaves do not appear to have been an extraordinary number to be enclosed under one roof. Augustus restricted their height to 70 feet, an elevation which appears sufficient, but for exceeding which many were afterwards accused and fined. And thus the irregularity of the city became so great that its conflagration in Nero's time might be considered a public good in so far as it made way for the judicious plans of that emperor, who, passionately fond of building, first made Rome a regular and splendid city. The general uniformity of plan still admitted considerable variety in the detail; but they were all attended with imperfections repugnant to modern ideas of taste and convenience. The absence of chimneys entirely, and windows generally, may be particularly noticed. The only light received in the rooms was through an aperture formed in or over the door; and even this was borrowed. But we must recollect that the Romans were not a domestic people. Their society was to be sought in the Forum and public porticoes.

A great feature in the arrangement of the ancient house, as distinguished from the modern, was the internal court. Courts were usually formed each surrounded by apartments, which, lighted from within, seem to have afforded little possibility of the domestic concerns of the family being overlooked by any one not included within the walls. But this was an advantage they did not really possess as we may conclude from Plautus;‡ and Seneca speaks of the annoyance the neighbours were subject to, from the disorderly luxury of those who, changing night into day, indulged in the false refinement and late hours of the age. A jealousy, somewhat approaching that of the modern Eastern nations, seems to have prevailed towards the female part of the family, to whom the most remote portion of the house was appropriated; an inner court, around which their rooms were distributed, was only accessible through another, where a similar arrangement existed for the accommodation of the men and the servants.

The information which Vitruvius furnishes respecting the houses of the Romans, has been, within the last 50 years, well illustrated by the excavations at Pompeii, a city which, along with Herculaneum and Stabia, was overwhelmed by a tremendous eruption of Mount Vesuvius on the 24th of August, in the second year of the reign of the emperor Titus, or A. D. 79, and which, consequently, contains houses built and inhabited by Romans of the time in which Vitruvius wrote. So far as the town has been excavated, the streets are found to be curiously paved, with irregularly shaped pieces of black volcanic stone, well put together, and generally exhibiting the tracks of wheels. The houses are ill-built of the worst brick and rubble work, with mortar generally but insufficiently mixed, and their thickness apparently inadequate to the service they were intended to perform. The plaster is, however, very excellent, and to it the walls have evidently been considerably indebted for their durability. It appears to have been used precisely in the manner prescribed by Vitruvius, who directs, that, after the first rough coat was applied, a second was to be added, of arenatum, composed principally of sand and lime: this

* See Eustace's Classical Tour through Italy.

† We purposely abstain from entering into any description of the various splendid temples and ruins of ancient Rome which still remain, not only because the subject is too extensive for this note, but also because it has been sufficiently illustrated by modern travellers. For a description of the ruins of Palmyra and Balbec, the curious reader is referred to the valuable volume published by Messrs. Dawkins and Wood in 1753.

‡ See particularly Belzoni's Researches, and M. Du-tema's Recherches sur le Témis le plus reculé de l'Usage des Voutes, chez les Anciens. The object of the latter work is to show that the scientific construction of the arch was in practice even from the most remote periods of antiquity. This opinion is ably combated in the *Edin. Review* for Jan. 1906.

• Mil. Glor. 2-3.

very considerable works at Rome. For it was he who first enclosed that city with a wall of stone, and laid the foundations of the temple of Jupiter Capitolinus, which his grandson

Tarquinius Superbus finished at a great expense, having for that purpose called in the best workmen from Etruria. The Roman citizens were not dispensed with from sharing in that work,

was afterwards to be covered with marmoratum, in the composition of which the place of the sand of the arenatum was supplied by pounded marble. The last coat at Pompeii has been put on very thin, and seems to have been well worked and rubbed upon the rough exterior of the arenatum, until a perfectly smooth and polished surface was obtained, nearly as hard as marble. The smallest apartments at Pompeii are lined with this stucco, painted in the most brilliant and endless variety of colours, and sometimes embellished with a single figure, or subject, in the centre, or at equal distances. The walls of the houses are also decorated with painted imitations of variegated marbles, perhaps once a sort of scagliola. Of the real material few blocks are found except in public buildings or monuments. In this the Pompeians imitated the more costly reality of the Romans, who inserted in their walls pieces, or slabs, of the most rare and valuable marbles: the undulated Thasian, or Carystian, the variegated Phrygian, spotted with the blood of Atys, and the Numidian conglomerate. But the real colours of the marbles were not sufficiently splendid: art was employed to give them tints they possessed not naturally. The Numidian and Syennitic were used as thresholds, and a method was discovered of veining slabs with gold, until at length leaves of this metal were introduced in profusion, covering the beams, walls, and even roofs of the houses. The floors, also, were covered with cement, in which small pieces of marble, or coloured stones, were imbedded at intervals, forming various patterns of geometrical figures, symmetrically disposed; but this was the practice in apartments only of inferior consequence; for in the best rooms mosaic was used, with ornamented margins, and a device or figure in the centre. The doors, formed of wood, have in no instance been found complete: the material being always reduced to carbon. They revolved upon pivots, and were fastened by bolts, which hung from chains. Of wood were also the bedsteads, though sometimes of iron; but beds were more generally made merely of carpets and vests spread upon the ground. It does not fall within the design of this note to give a detailed account of the various articles of household furniture or convenience found at Pompeii; but it may be gratifying to the curious to state, that almost every variety is to be met with there:—implements of silver, brass, stone, earthen-ware vases of all sizes, adapted to every use; trumpets, bells, gridirons, colanders, saucepans, some lined with silver, kettles, ladles, moulds for jelly or pastry, urns for keeping water hot, upon the principle of the modern tea-urn, horn lanterns, spits; in short, almost every article of kitchen or other furniture now in use, except forks: also, chains, bolts, scourges, dice (some said to be loaded); a complete toilet, with combs, thimbles, rings, paint, pins, ear-rings, with pearls, &c. &c.

Pompeii was a small town, and furnishes specimens chiefly of houses inhabited by Romans in the middling and lower ranks of life; but the account which the younger Pliny has left us of his winter residence at Laurentinum, situated 17 miles distant from Rome, conveys a very perfect conception of the villa of a wealthy Roman nobleman. As the description is distinct and particular, it may be quoted in this place with advantage.

* See the splendid work of Sir William Gell and John P. Gandy, entitled, "Pompeiana: the topography, edifices, and ornaments of Pompeii."

—"My villa," says he, "is large enough to afford all desirable accommodation, without being extensive. The porch before it is plain, but not mean, through which you enter a portico in the form of the letter D, which includes a small but agreeable area. This affords a very commodious retreat in bad weather, not only as it is enclosed with windows, but particularly as it is sheltered by an extraordinary projection of roof. From the middle of this portico you pass into an inward court extremely pleasant, and thence into a handsome hall, which runs out towards the sea. On every side of this hall there are either folding doors, or windows equally large, by which means you have a view from the front and two sides, as it were of three different seas; from the back part you see the middle of the court, the portico, and area; and by another view you look through the portico into the porch, whence the prospect is terminated by the woods and mountains, which are seen at a distance. On the left hand side of this hall, somewhat farther from the sea, lies a large drawing room, and beyond that a second of smaller size, which has one window to the rising and another to the setting sun. The angle which the projection forms with this drawing-room retains and increases the warmth of the sun; and hither my family retreat in winter to perform their exercises. Contiguous to this is a room, forming the segment of a circle, the windows of which are so placed as to receive the sun the whole day: in the walls are contained a set of cases, which hold a collection of such authors whose works can never be read too often. Thence you pass into a bed-chamber through a passage, which, being boarded and suspended over a stove which runs underneath, tempers the heat which it receives and conveys to all parts of this room. The remainder of this side of the house is appropriated to the use of my slaves and freedmen; but most of the apartments are neat enough to receive any of my friends. In the opposite wing is a room ornamented in a very elegant taste; next to which lies another room, which, though large for a parlour, makes but a moderate dining-room. Beyond is a bedchamber, together with its antichamber, the height of which renders it cool in summer, as its being sheltered on all sides from the winds makes it warm in winter. To this apartment another of the same sort is joined by a common wall. From thence you enter into the grand and spacious cooling room belonging to the bath, from the opposite walls of which two round basins project sufficiently large to swim in. Contiguous to this is the perfuming room, then the sweating room, and next to that the furnace which conveys the heat to the baths. Adjoining are the two little bathing rooms, fitted up in an elegant rather than a costly manner. At the other end is a second turret, in which is a room that receives the rising and setting sun. Behind this is a large repository, near to which is a gallery of curiosities, and underneath is a spacious dining-room. It looks upon the garden and gestatio which surrounds the garden. Between the garden and this gestatio is a banqueting room. Two apartments run round the back part of it, the windows whereof look upon the entrance of the villa, and into a pleasant kitchen garden. From hence an enclosed portico extends, which, by its great length, you might suppose erected for the use of the public. It has a range of windows on each side; but on that which looks towards the sea, they are double the number of those next the garden. Before this portico lies a terrace,

which, though very painful and laborious, being added to the fatigues of war, they did not think too heavy; so much joy they conceived, and so much honour they thought it, to build¹ the temples of their gods with their own hands.

The same Tarquinius Priscus raised two other works, not so splendid indeed in outward appearance, but far more considerable in regard to labour and expense: works, says Livy, to which the magnificence of our days, in its most supreme degree, has scarce been capable of producing any thing comparable.²

One of these works was the subterraneous sewers and canals that received all the dirt and filth of the city; the remains of which still raise admiration and astonishment from the boldness of the undertaking, and the greatness of the expense it must necessarily have cost to complete it. And indeed, of what thickness and solidity must these vaulted water courses have been, which ran from the extremity of the city as far as the Tiber, to support for so many ages, without ever giving way in the least, the enormous weight of the vast streets of Rome erected upon them, through which an infinity of carriages of immense weight were continually passing!

M. Scaurus, to adorn the stage of a theatre during his edileship, which was to continue only a month at most, had caused three hundred and sixty columns of marble to be prepared, many of

which were thirty-eight feet high.³ When the time for the shows was expired, he had all those pillars carried into his own house. The undertaker for making good the common sewers, obliged that edile to give him security for repairing the damage, that the carriage of so many heavy pillars might occasion to those vaults, which from the time of Tarquinius Priscus, that is to say, for almost eight hundred years, had continued immovable: and still bore so excessive a load without giving way. Besides which, these subterraneous canals contributed exceedingly to the cleanliness of the houses and streets, as well as to the purity and wholesomeness of the air. The water of seven brooks, which had been united together, and which was frequently turned into these subterraneous beds, cleansed them entirely, and carried off along with them all the filth into the Tiber.

Works of this kind, though hid under the earth, and buried in darkness, will no doubt appear to every good judge more worthy of praise, than the most magnificent edifices, and most superb palaces. These suit the majesty of kings indeed, but do not exalt their merit, and, properly speaking, reflect no honour but on the skill of the architect: whereas the others argue princes, who know the true value of things; who do not suffer themselves to be dazzled by false splendour; who are more intent upon the public utility than their own glory; and who are studious to extend their services and beneficence to the latest posterity: objects worthy the ambition of a prince!

After the Tarquins were expelled Rome, the people having abolished monarchical government, and resumed the sovereign authority, were solely intent upon extending the bounds of their empire. When, in process of time, they came to have more commerce with the Greeks, they began to erect more superb and more regular buildings. For it was from the Greeks that the Romans learned to excel in architecture. Till then, their edifices had nothing to recommend them but their solidity and magnitude. Of all the orders, they knew only the Tuscan. They were almost entirely ignorant of sculpture, and did not even use marble: at least they neither knew how to polish it, nor make pillars and other works of it, that by their beauty and excellent workmanship might make a magnificent appearance when applied in proper places.⁴

It was not, properly speaking, till towards the latter times of the republic, and under the emperors, that is to say, when luxury was grown to a great height at Rome, that architecture appeared there in all its splendour. What a multitude of superb buildings and magnificent

1 Qui cum haud parvus et ipse militiæ adderetur labor, minus tamen plebs gravabatur, ac templa deum exadificare manibus suis. *Liv. l. i. n. 30.*

2 Quæ (plebs) posthac et ad alia, ut specie minora, sic laboris aliquanto majoris, traduebatur opera: foras in circo faciendas, cloacampque; maximam receptaculum omnium purgamentorum urbis sub terram agendam: quibus duobus operibus vix nova hæc magnificentia quicquam adæquare potuit. *Liv. ibid.*

perfumed with violets. On the upper end of the terrace and portico stands a detached building in the garden, which I call my favourite; and indeed it is particularly so, having erected it myself. It contains a very warm winter-room, one side of which looks upon the terrace, the other has a view of the sea, and both lie exposed to the sun. Through the folding doors you see the opposite chamber, and from the windows is a prospect of the enclosed portico. On that side next the sea, and opposite the middle wall, stands a little elegant recess, which by means of glass doors and a curtain, is either laid open to the adjoining room, or separated from it. Adjoining to this is a bedchamber, which neither the voice of the servants, the murmuring of the sea, nor even the roaring of a tempest can reach. This profound tranquillity is occasioned by a passage which separates the wall of the chamber from that of the garden; and thus, by means of that intervening space, every noise is excluded. Annexed to this is a small stove room, which, by opening a little window, warms the bedchamber to the degree of heat required. Beyond this lie a chamber and antichamber, which enjoy the sun, though obliquely, from the time it rises till the afternoon.—*Ed.*

3 *Plin. l. xxxvi. c. 2.*

4 *Plin. l. xxxv. c. 6.*

works were erected, which still adorn Rome! The pantheon, the baths, the amphitheatre called the Coliseum, the aqueducts, the causeways, the pillars of Trajan and Antonine!—The famous bridge over the Danube, built by the order of Trajan, was a work which alone would have sufficed to have immortalized his name.⁵ It had twenty piles to support the arches, each sixty feet thick, an hundred and fifty high, without including the foundations, and an hundred and seventy feet distant from one another, which makes in all a breadth of fifteen hundred fourscore and ten yards. This was, however, that part of the whole country in which the Danube was narrowest, but at the same time deepest and most rapid; which seemed an obstacle not to be surmounted by human industry.⁶ It was impossible to make dams in it for laying the foundation of the piles. Instead of which, it was necessary to throw into the bed of the river a prodigious quantity of different materials, and by that means to form a kind of bases equal to the height of the water, in order afterwards to erect the piles upon them, and the whole superstructure of the bridge. Trajan made this bridge with the view of using it against the barbarians. His successor Adrian, on the contrary, apprehended its being used by the barbarians against the Romans, and caused the arches of it to be demolished. Apollodorus of Damascus was the architect who presided in erecting this bridge: he had been employed in many other works by Trajan. His end was very unfortunate.

The emperor Adrian had caused a temple to be built in honour of Rome and of Venus, at the extremities of which they were placed, each sitting upon a throne: there is reason to believe that he had drawn the plan, and given the dimensions himself, because he piqued himself upon excelling in all arts and sciences.⁷ After it was built, Adrian sent the draught of it to Apollodorus. He remembered, that one day inclining to give his opinion upon a building Trajan was discoursing about to Apollodorus, that architect had rejected what he said with contempt, as talking of what he did not understand. It was therefore by way of insult, and to show him that something great and perfect might be done without him, that he sent him the design of this temple, with express orders to let him know his opinion of it. Apollodorus was naturally no flatterer, and saw plainly the affront intended him. After having praised the beauty, delicacy, and magnificence of the building, he added, that since he was ordered to give his opinion of it, he could not deny but it had one fault; which was, that if the goddesses should have an inclination to rise up, they

would be in danger of breaking their heads, because the arch of the roof was too confined, and the temple not high enough. The emperor was immediately sensible of the gross and irreparable fault he had committed, and was inconsolable upon it. But the architect paid for it, and his too great ingenuity, which was not perhaps sufficiently discreet and respectful, cost him his life.

I have not ranked, in the number of the magnificent buildings of Rome, the palace called the Golden House,⁸ which Nero caused to be erected there, though perhaps nothing like it was ever seen, either for the extent of its walls, the beauty of its gardens, the number and delicacy of its porticoes, the sumptuousness of its buildings, or the gold, pearls, jewels, and other precious materials with which it glittered. I do not think it allowable to give the name of magnificence to a palace built with the spoils, and cemented with the blood of the Roman citizens. Whence, says Suetonius, the buildings of Nero were more destructive to the empire than all his other follies. *Non in alia re damnosior quam in edificando.* Cicero had passed a still more severe judgment upon it,⁹ who held no expenses to be really laudable, but such as had the public utility in view; as the walls of cities and citadels, arsenals, ports, aqueducts, causeways, and others, of a like nature. He carried his rigour so far, as to condemn theatres, piazzas, and even new temples; and supported his opinion by the authority of Demetrius Phalereus, who absolutely condemned the excessive expenses of Pericles in such structures.

The same Cicero makes excellent reflections¹⁰ upon the buildings of private persons: for there is certainly a difference to be made in this point, as well as all others, in regard to princes. He is for having persons of the first rank in the state lodged in an honourable manner, and that they should support their dignity by their habitations; but at the same time that their houses should not be their principal merit, and that the

⁷ Suetonius (in Neron. c. cxxi.) gives some curious details of this enormous edifice. In the vestibule stood a colossal statue of Nero, 120 feet in height; there were three porticoes, each a mile in length, and supported by three rows of pillars; the garden seems to have resembled a park, and contained an immense piece of water, woods, vineyards, and pasture ground, herds, and even wild beasts. On the banks of the lake rose various edifices that resembled towns. In the palace itself the rooms were lined with gold, gems, and mother of pearl. The ceilings of the dining rooms were adorned with ivory pannels, so contrived as to scatter flowers, and shower perfumes on the guests. The principal banquetting-room revolved upon itself, representing the motions of the heavens: the baths were supplied with salt water from the sea, and mineral water from the Albulæ, near Solfatara, near Tibur.—Ed.

⁵ Dio. l. lxxviii. p. 776. ⁶ Ibid. l. lxxix. pp. 780, 790.

⁸ Cic. l. ii. de offic. n. 60. ⁹ Ibid. l. i. offic. n. 130, 140.

master should do honour to the dwelling, and not the dwelling to the master.¹ He recommends to the great men that build, carefully to avoid the excessive expenses incurred by the magnificence of structures: expenses, which become of fatal and contagious example to a city; the generality not failing, and making it a merit, to imitate, and sometimes even to exceed, the great. Palaces thus multiplied are said to do honour to a city. They rather dishonour it, because they corrupt it, by rendering luxury and pomp continually necessary, by the costliness of furniture, and the other expensive ornaments, required in lofty buildings; which are, besides, often the cause of the ruin of families.

Cato, in his book upon rural life, gives very wise advice. When, says he, to build is the question, we should deliberate a great while, (and often not build at all,) but when to plant, we should not deliberate but plant directly.²

In case we build, prudence requires our taking good precautions. "Formerly," says Vitruvius,³ "there was a very severe but very just law at Ephesus, by which the architects who undertook a public building, were obliged to declare what it would cost, and to do it for the price they had demanded, for the performance of which their whole estate was bound. When the work was finished, they were publicly honoured and rewarded, if the expense was according to their estimate. If the expense exceeded the agreement only a fourth, the public paid the surplus. But if it went beyond that, the architect made good the deficiency. It were to be wished," continues Vitruvius, "that the Romans had such a regulation in regard to their buildings, as well public as private: it would prevent the ruin of many persons."

This is a very just reflection, and argues a very estimable character in Vitruvius, and a great fund of probity, which indeed distinguishes itself throughout his whole work, and does him no less honour than his great capacity. He followed his profession with a noble disinterestedness, very uncommon in those who practise it. Reputation, not gain, was his motive.⁴

1 Ornanda est dignitas domo, non ex domo dignitas tota querenda: nec domo dominus, sed domino domus honestanda est.—Cavendum est etiam, præsertim si ipse ædifices ne extra modum sumptu et magnificentia prodeat. Quo in genere multum mali in exemplo est: studioso enim plerique; præsertim in hac parte, facta principum imitantur.

2 Ædificare diu cogitare oportet, conserere cogitare non oportet, sed facere.

3 Vitruv. præfat. l. x.

4 Ego autem, Cæsar, non ad pecuniam parandam ex arte dedi studium, sed potius tenuitatem cum bona famâ quam abundantiam cum infamia sequendam probavi. Ceteri architecti rogant et ambiunt, ut architectentur: mihi autem a præceptoribus est traditum, rogatum non rogantem oportere suscipere curam, quod ingenuus color

He had learned from his masters, that an architect ought to stay till he is desired to undertake a work; and that he cannot, without shame, make a demand, that shows him interested in it: because every body knows people do not solicit others to do them good, but to receive it from them. He requires in his profession an extent of knowledge, that occasions astonishment.⁵ According to him, an architect must be both ingenious and laborious: for capacity without application, and application without capacity, never make an excellent artist. He must therefore know how to design, understand geometry, not be ignorant of optics, have learned arithmetic, know much of history, have well studied philosophy, and have some knowledge of music, physic, civil law, and astronomy. He afterwards proceeds to show particularly, in what manner each of these branches of learning may be useful to an architect.

When he comes to philosophy, besides the knowledge necessary to his art to be derived from the physics, he considers it with regard to morals. "The study of philosophy," says he, "serves also to render the architect more complete, who ought to have a soul great and bold without arrogance, equitable and faithful, and what is still most important, entirely exempt from avarice: for it is utterly impossible ever to do any thing well, or to attain any excellence without fidelity and honour. He ought therefore to be disinterested, and to have less in view the acquiring of riches, than honour and reputation, by architecture; never doing any thing unworthy of so honourable a profession: for this is what philosophy prescribes."

Vitruvius has not thought fit to require in his architect the talent of eloquence, which it is often proper even to distrust, as a very happy saying Plutarch has preserved explains. It was occasioned by a considerable building that the Athenians intended to erect, for the execution of which two architects offered themselves to the people. The one, a fine speaker, but not very expert in his art, charmed and dazzled the whole assembly by the elegant manner in which he expressed himself in explaining the plan he proposed to follow. The other, as bad an orator as he was an excellent architect, contented himself with telling the Athenians:—"Men of Athens, I will do what he has said."⁶ I conceived, that I could not conclude this article upon architecture better, than with giving some idea of the ability and manners of him (Vitruvius), who in the opinion of all good judges, practised and taught it with most reputation.

movetur pudore petendo rem suspiciosam. Nam beneficium dantes, non recipientes, ambiuntur.—Vitruv. præfat. l. vi.

5 Lib. l. c. 1.

6 Ἀρχεῖς Ἀθηναῖοι, ἐγὼ οὐτὸς τίποινα ἔργα ποιήσω.

OF SCULPTURE.

SECT. I.

Of the different species of Sculpture.

SCULPTURE is an art, which by the means of design or plan and of solid matter, imitates the palpable objects of nature. Its matter is wood, stone, marble, ivory; different metals, as gold, silver, copper; precious stones, as agate, and the like. This art includes also casting or founding, which is subdivided into the art of making figures of wax, and that of casting them in all sorts of metals. By sculpture, I understand here, all these different species.

The sculptors and painters have often had great disputes amongst themselves upon the pre-eminence of their several professions; the first founding the preference upon the duration of their works, and the latter opposing them with the effects of the mixture and vivacity of colours. But, without entering into a question not easy to decide, sculpture and painting may be considered as two sisters, that have but one origin, and whose advantages ought to be common; I might almost say as the same art, of which design is the soul and rule, but which work in a different manner, and upon different materials.

It is difficult and little important, to trace, through the obscurity of remote ages, the first inventors of sculpture.⁷ Its origin may be dated

with that of the world, and we may say that God was the first statuary, when having created all beings, he seemed to redouble his attention in forming the body of man, for the beauty and

recorded intimations of the art of sculpture.* The images of Laban, and the signet of Judah, show that even in the patriarchal ages sculpture was not unknown; and the golden calf, the decorations of the tabernacle, and the ark of the covenant, executed by Bezaleel and Aholiab, at a later period, evince a considerable degree of advancement in the ornamental arts, and carry back their origin to a very remote period. Among the Persians, Babylonians, and other eastern nations, sculpture seems to have been very early practised. In examining the ruins of Persepolis, † sufficient evidence occurred, that sculpture was known in Persia in the period of its earliest kings. The ancient Indian temples of the remotest ages contain also vestiges of the arts of design. Of the temple of Belus at Babylon, it is said by ancient authors that the walls were covered with grotesque figures both in painting and sculpture, and that the interior was furnished with numerous ornamented vessels of different materials, and an image of gold. According to Diodorus Siculus, the external walls of the palace of Semiramis, which were of brick, were covered with representations of human figures and animals, as also of historical events, battles, hunting scenes, &c.

But of all the more ancient nations, the Egyptians seem to have cultivated the arts to the greatest extent. The ideas which that wonderful people entertained of the Divinity and of the destinies of man,—the early discoveries of their astronomers, and the wild dreams of their magicians,—were all expressed in strange symbols, which, now that their primitive meaning is forgotten, remain objects of mysterious wonder or superstitious veneration. It was the popular belief among them, that the spirit when separated by death from the body, hovered round its former tenement so long as it could be preserved from corruption, but quitted it as soon as it was reduced to dust. Anxious, therefore, to preserve this link between their earthly and spiritual nature, they not only embalmed their dead with the most successful skill, but placed them in costly sepulchres, laboriously adorned with ornaments, devices, and hieroglyphical representations. The coffin, also, in which the body was enclosed, they curiously carved with forms expressive of the course pursued by the deceased in his lifetime, of religious rites, or of philosophical mysteries.

⁷ Winkelmann * considers that the art of sculpture originated among the Egyptians, the Etruscans, and Greeks, independently of each other; and that their first attempts were introduced and characterized by their public worship, or political establishments. As evidences of its practice have been found in every country, however insulated, as, for instance, among the islands of the South Sea, it is probable that its invention can be exclusively claimed by no nation or nations in particular, and being the simplest imitation of form, it may reasonably be considered as an art which would very naturally suggest itself to the human mind, even in its most uncultivated state.

The Old Testament contains undoubtedly the earliest

* Monumenti Antichi Inediti da Giovanni Winkelmann, Roma, 1767.

* Gen. xxxi. 30. Exod. xxxii. xxxv. 30—35. Isa. xlv. 10, &c.

† See Rollin's Ancient History, vol. ii. p. 138—145. Note.

perfection of which he seems to have wrought with a kind of satisfaction and complacency. Long after he had finished this masterpiece of his all-powerful hands, he was willing to be honoured principally by the sculptor's application in building the ark of the covenant, of which himself gave the idea to the legislator of the Hebrews. But in what terms does he speak of the admirable artist he thought fit to employ in it? "I have chosen," says he to his prophet, "a man of the tribe of Judah, and I have filled him with the Spirit of God, in wisdom, and in understanding, and in knowledge, and in all manner of workmanship, to devise cunning works, to work in gold, and in silver, and in brass, and in cutting of stones, to set them, and in cutting of timber, to work in all manner of workmanship."¹ He speaks in the same manner in respect to the workmen that were to build and adorn the temple of Jerusalem.

1 Exodus xxxi.

This extensive practice of sculpture, however, among the Egyptians, does not appear to have been accompanied by a corresponding progressive improvement in the art. Two circumstances may have obstructed its progress to perfection: First, the Egyptians did not possess in their own persons an elegant or symmetrical standard whereby to model their taste; and Secondly, they were restricted by their laws to the principles and practice of their ancestors, and were not permitted to introduce any innovations in the attitudes or figures of the objects of their veneration. * Their reverence, besides, for the bodies of the dead precluded them from any acquaintance with anatomy. Hence their statues are not only uniform and alike, but display no disposition of parts,—no muscles, veins, or contractions. Their attitudes are simply rectilinear, and without lateral movement; their faces are flatish; the eyebrows, eyelids, and mouth, formed of simple curves, slightly but sharply marked, and with little expression; the form of the head and limbs rather round and effeminate, with only the most evident projections and hollows. The male deities have their hands and arms stretched and closely stuck to their sides, and their feet are not parallel, but in the same line, one advanced before the other. In the female figures, we may observe, in those at least which are upright, that one hand is laid upon the breasts. They are draped, but not a single fold can be discovered; the clothing is so exactly adapted to the body, that it can be known only by examining the neck and legs. Those of the male sex are naked, excepting a kind of square apron.

Although the Egyptians failed in their attempt to imitate the human figure, they formed animals in which correctness in designing the bones and muscles, and even an elegant contour and gradation in every part, have been found to exist. The prohibition, which applied to human figures, was not extended to those of animals, which circumstance will account for a greater degree of perfection in the execution of them. In designing their fictitious monsters, also, the Egyptians were more consistent than other nations. The sphinx, for instance, which is simply a human head attached to the body of a

Nothing could exalt the merit of sculpture so much as so noble a destination, if it had fulfilled it faithfully. But long before the building of the temple, and even the tabernacle, it had shamefully prostituted itself for hire to idolatry, which by its means filled the world with statues of false divinities, and exposed them for the adoration of the people. We find in the scripture, that one of the causes which had conduced most to the spreading of this impious worship, had been the extreme beauty which the workmen in emulation of each other had exerted themselves to give those statues.² The admiration excited by the view of these excellent works of art, was a kind of enchantment, which by strongly affecting the senses, conveyed the illusion to the mind, and drew in the multitude. It is against this universal delusion Jeremiah admonished the Israelites to beware, when they should see in Babylon the statues of gold and

2 Also the singular diligence of the artificer did help to set forward the ignorant to more superstition. For he peradventure willing to please one in authority, forced all his skill to make the resemblance of the best fashion. And so the multitude allured by the grace of the work, took him now for a god, whom a little before, was but honoured as a man. And this was an occasion to deceive the world.—Wisd. xiv. 18, 19, 20, 21.

brute, is an invention more consonant to the economy of nature, than many of the fabulous creations of the Greeks and Romans. *

Notwithstanding the great uniformity of character in Egyptian sculpture, some critics have imagined they perceived several modifications of style, indicating corresponding eras in its history. Winkelmann assigns three epochs to the arts in Egypt. 1. The ancient, to the reign of Cambyzes, when Egypt became subject to the Persians. 2. The middle age, when the native Egyptians studied and practised sculpture under the Persians and Greeks. 3. The modern, under Hadrian and his successors, when the style of imitation was introduced. †—Carlo Fèa assigns five periods. 1. Before the reign of Sesostris, who, he asserts, introduced a new style. 2. Under Sesostris, for the space of 99 years. 3. From Sesostris to Psammetichus, who admitted the Greeks into Egypt, by whom the manners and taste of the nation were influenced. 4. The style of imitation practised by the Romans. 5. The style, to the time of Theodosius the Great, who took away the relics.—As an examination of these different eras would lead into technical details and hypothetical assumptions, and in all probability be more laborious than satisfactory, we merely refer those who would wish to inquire into the subject to the dissertations of Winkelmann, and his annotators Fèa and Heyne, and to the works of Pococke, Norden, Denon, and other travellers who have visited Egypt.

* Dallaway's *Statuary of the Ancients*, 1816, 8vo.

† The statue of Hadrian's favourite ANTINOUS, which that emperor commanded the Egyptians to place among the objects of their worship, although in the disguise of an Egyptian, will be found by an attentive observer to be a Grecian, in the whole form of the head, its oval contour, the correctness of the profile, the fulness of the chin, and the suavity of the mouth.

* Plato de Legibus, l. ii.; Recherches sur l'Art Statuaire, par Emeric David; 1808, 8vo.

silver carried about in pomp upon the days of solemnity. At that time, says the prophet, when the whole multitude, filled with veneration and awe, shall prostrate themselves before idols, (for the captivity, in which the people of God were in a strange land, would not admit them to express themselves aloud) say within yourselves: *IT IS ONLY THOU, O LORD, THAT OUGHT TO BE ADORED.*³ It must be owned also that sculpture did not contribute a little to the corruption of manners, by the nudity of the images, and representations contrary to modesty, as the Pagans themselves have confessed.⁴ I thought it proper to premise this remark, that in what I shall say hereafter in praise of sculpture, the reader may see I distinguish the excellency of the art in itself, from the abuse which men have made of it.

³ Baruch vi. 6.

⁴ *Auxere et artem vitiorum irritamenta. Plin. Proem. l. xxxiii.*

After the Egyptian works of art, in the order of antiquity, those of the Etrurians have generally been placed. Sir W. Hamilton, however, considers what has been so long called Etruscan workmanship, to be in fact Grecian; and Lanzi has satisfactorily proved that the Etrurians were merely imitators of the Greeks, or rather their copyists.* The first emigration to Etruria was that of the Pelasgi,† a people of Arcadia, who brought with them the style of art at that time prevalent in Greece, which is evident from the Pelasgo-Greek character, observable upon Etrusco-Pelasgick gems and monuments, from which original manner there is no instance of their entire deviation. About six centuries after that event, a principal settlement was made, by a colony of the Lydians, 300 years before the time of Herodotus, who fixes the date in the days of Lycurgus. These colonists introduced the art of writing, and in process of time taught the Etrurians their sculpture and design, in which the latter eventually attained to great excellence. The figures now seen on the most ancient specimens of Etruscan art correspond, generally speaking, with the old mythology of Greece, or are illustrative of the mystical shows of Eleusis. The more rude and early specimens are similar to those of the very ancient Greeks, whose primitive manner they continued to copy, even after a more elegant and dignified style, founded on enlarged principles, had been adopted by the Greeks themselves.

Noia and Capua, the principal cities of the Etrurians, were founded in the 801st year before the Christian era; and it has been near the ancient sites of these cities that the best specimens of Etruscan vases, patera, and other vessels used in sacred and funeral rites, have been found. Many of them may be seen in the various museums and cabinets of Europe. A minute examination of them will immediately present to the mind that uniform principle of grace and elegance of form which distinguish the works of Greece and all her colonies, whatever may have

The first sculptors made their works of earth, whether they were statues, or moulds and models.⁵ This made the statuary Pasiteles say, that the works which were either cast, or cut with a chisel or graver, owed their being to the art of making figures of earth, called *Plastice*. It is said that Demaratus, the father of Tarquinus Priscus, who took refuge from Corinth in Etruria, brought thither abundance of workmen with him who excelled in that art, and introduced the taste for it there, which afterwards communicated itself to the rest of Italy. The statues erected in that country to the gods, were at first only of earth, to which for their whole ornament, was added a red colour. We ought not to be ashamed of the men, says Pliny, who adored such gods.⁶ They set no value upon gold and silver either for themselves or their

been the individual discrimination of one province from another, in climate, laws, manners, or government.* Of Greece, we shall come to speak at large in another note.
—Ed.

5 Materials of Sculpture.

The sculpture of the ancients was executed in various substances, as clay, plaster, wood, ivory, gold, silver, basalt, porphyry, alabaster, and marbles, to which may be added precious stones. Clay, we may presume, would be the first material employed in statuary. It was frequently applied to the purpose of *bas relief* sculpture, and when finished and properly baked like pottery, formed a very durable substance. Numerous specimens of this species of workmanship have been found among ancient sepulchres. Wood, plaster, or stucco was employed for the images of the gods worshipped by the poorer classes. The works made of ivory, gold, and silver were generally of a small size. Some exceptions to this, however, are on record, as, for instance, the colossal Minerva of Phidias, composed of gold and ivory, which was 26 cubits high; the Jupiter Olympus, composed of the same materials, and by the same sculptor; and several other statues in some of the most celebrated temples. M. de Pauw calculates, that the statue of Jupiter, which was 54 feet high, would consist of the teeth of 300 elephants.

Of stones, allowing the Egyptians to take the lead in sculpture, the first to be considered is *basalt*, a name given to a stone found in the mountains of Egypt, called *Basanitica*. Many of their statues are formed of it. Pliny † has described several of them, and the statue of Minerva still to be seen at Thebes is by travellers determined to be basalt. Mineralogists hold different opinions as to the original formation of basalt. Jameson ‡ asserts, that many of the antique basalts preserved in collections are

G Hæc tum effigies deorum orant lautatissimæ. Nec penitet nos illorum, qui tales deos coluere. Aurum enia et argentum ne diis quidem conficiebant. *Plin.*

* See Museum Etruscum cum Observ. Gorii, 3 tom. fol. 1737;—Picture: *Hetruscorum in vasculis*, Passeri, 4 tom. fol. 1707–70;—*Le Costumes, ou Essai sur les Habillements et les Usages de plusieurs peuples de l'antiquité* prouvé par les monuments par A. J. de Leno, Peintre, 4to, 1766 and 1785;—*The Costume of the Ancients*, by Thomas Hope, 8vo. 1809. The latter work contains 200 etchings of subjects taken from Etruscan vases.

† Lib. xxxvi. c. 7.

‡ On Minerals, vol. i. p. 274.

* Antiquités Etrusques, Grecques, et Romaines tirées du cabinet de M. Hamilton, par D'Hancarville, 4 tom. fol. 1768;—*Recueil de Graveurs d'après les vases antiques*, &c. trouvées pendant les années 1789 et 1790, tirées du cabinet de M. le Chevalier Hamilton, publiées par M. G. Tischbein, 4 tom. fol. 1792–95;—Lanzi Saggio della Lingua Etrusca, 3 vols. 8vo.

† Herod. l. i.

deities. Juvenal calls a statue, like that erected by Tarquinius Priscus in the temple of the father of the Gods;

Fictilis, et nullo violatus Jupiter auro.
A Jove of earth, nor yet by gold profan'd.

It was very late before they began to set up golden or gilt statues at Rome.¹ This was first done in the consulship of P. Corn. Cethegus, and M. Bæbius Tampilus, in the 571st, or 573d year of Rome, A. M. 3820. Portraits were afterwards made also of plaster and wax, the invention of which is ascribed to Lysistratus of Sicyone, the brother of Lysippus.²

We find that the ancients made statues of almost all sorts of wood. There was an image of Apollo at Sicyone made of box.³ At Ephesus, according to some writer, that of Diana was of cedar, as well as the roof of the temple. The lemon-tree, the cypress, the palm, the olive, the ebony, the vine, in a word, all trees not subject to rot, or to be worm-eaten, were used for statues.

1 Aelius Giabrio duumvir, statuam auratam, quæ prius omnium in Italia statua aurata est, patri Giabroni posuit. *Liv.* l. xi. n. 34.

2 Plin. l. xxxv. c. 12.

3 Pausan. l. vi. Plin. l. xvi. c. 40.

evidently syenite or green stone. Dolomieu considers the material called basalt, used in Egyptian statues, as the substance called by the Germans, *trap*. * *Trap* is the name given to a number of rocks distinguished by the great quantity of hornblende which they contain. Basalt is connected with some of these rocks, and therefore may, in a loose acceptation of the word, be called a variety of trap, but trap rocks are mostly compounds, and basalt is a simple mineral. There is a set of rocks distinguished in Werner by the name of Floetz-trap, and basalt is one of these rocks.

In the best times of the art, *porphyry* was rarely applied to statues, but it was used in obelisks and columns. The most celebrated quarries from which it was extracted were situate in that part of Arabia which borders on Egypt. There are varieties of green, brown, red, and black porphyry, which, with the serpentine, or verd antique, were used in sculpture by the Egyptians. † *Alabaster* was sometimes used; but it does not appear from any ancient remains that whole statues were made of it: on the contrary, heads, hands, and feet, formed of some other substance, such as bronze, yellow marble, &c. have been found attached to it.

Marble was the material most frequently used in sculpture, and of it by far the greatest number of the statues which have come down to the present time is made. The Greek marbles were superior to the Italian in hardness and purity of colour. ‡ White marble is the most common in Greece and Asia Minor, and it is mentioned by Homer; where Iris finds Helen employed in making a veil, and a comparison in point of whiteness occurs.

* Kidd's Outlines of Mineralogy, 1809.

† Caylus, Recueil d'Antiq. tom. v. p. 11.; Figuerius, cap. xvi.; Ferber, Lettres sur l'Italie.

‡ Caryophilus des Marmoribus Antiquis; De Launay, Mineralogie des Anciens.

† Il. iii. v. 125.

Marble soon became the most usual, and the most esteemed material for works of sculpture.⁴ It is believed that Dipænes and Scyllis, both of Crete, were the first who used it at Sicyone, which was long, in a manner the centre and school of arts: they lived about the 50th Olympiad, A. M. 3424, a little before Cyrus reigned in Persia. Bupalus and Anthernus, two brothers, made themselves famous for the art of carving marble, in the time of Hipponax, that is to say, in the 60th Olympiad, A. M. 3464. That poet had a very ugly face. They made his portrait in order to expose it to the laughter of spectators. Hipponax conceived a more than poetic fury against them, and made such virulent verses upon them, that, according to some, they hanged themselves through grief and shame. But this fact cannot be true, because there were works of their making after that time.

At first the artists used only white marble, brought from the isle of Paros.⁵ It was reported that in cutting these blocks of marble, they sometimes found natural figures of a Si-

4 Plin. l. xxxvi. c. 4.

5 Ibid. c. 6.

Phrygia produced white marble veined with different colours; near Megara was found that of a shelly kind; at Phigalia, in Arcadia, was gray marble, veined with light red; and at Nisa, in Asia Minor, white with blue veins; but of these the greater part was better suited for columns than statuary. The Pentelic marble, so called from Mount Pentelcus, near Athens, was selected for carving by Scopas, Praxiteles, and other famous sculptors. When broken, it shows large particles, which sparkle like grains of rock salt, is very solid, and much harder than that of Paros. The Parian, the *Lychnites* of Pliny, not, as Millin says, because candelabra were made of it, but because, according to Varro, the quarries were sometimes worked by torch-light, came out of Mount Marpesius in that island, and likewise from the promontory Lyginium. It does not lose its colour by exposure to the atmosphere, and is remarkable for large grains of a cubic form with which it is sown. It is extremely compact, though crystalline or scaly. A kind of marble, whiter than the Parian, was discovered at Luni in Etruria, but it is certainly less compact, and does not take so fine a polish. It is sometimes gray, and then it is called Bardiglio or Bigio di Carrara. Many Roman statues, and statues made by Greek artists at Rome, are of this marble. The marble of Mount Hymettus, used by statuary, was white, or rather inclining to ash colour. In the time of the Emperor Hadrian it was much esteemed, and imported to Rome, for the use of the Greek artists established there. The marble of Lesbos was of a livid white colour. Of black, that produced in Tanarus, a promontory of Laconia, was much esteemed. The Libyan was equally so, and was first brought to Rome by Lepidus and Lucullus. In Mount Pelicinus, in the island of Chios, was a black transparent marble. The Obsidian marble was black, and was so denominated because first discovered in Æthiopia, by Obsidius. The account Pliny gives of it is, that it is a kind of glass, and from its brit-

4 Lib. xxxvi. c. 26

lenus, a god Pan, a whale, and other fishes. Jasper and spotted marble became afterwards the fashion. It was brought principally from the quarries of Chio : and soon was commonly found in almost all countries. It is believed, that the manner of cutting large blocks of marble into many thin pieces, to cover the walls of houses, was invented in Caria. The palace of king Mausolus at Halicarnassus is the most ancient house, that had these incrustations of marble, which were one of its greatest ornaments.

The use of ivory in works of sculpture was known from the earliest ages of Greece. Homer speaks of such sculptures, though he never mentions elephants.*

The art of casting gold and silver is of the greatest antiquity, and cannot be traced to its origin. The gods of Laban, which Rachel stole, seem to have been of this kind. The jewels offered to Rebecca were of cast gold. Before the Israelites left Egypt, they had seen cast statues, which they imitated in casting the golden calf, as they did afterwards in the brazen serpent.⁷ From that time all the nations of the

east cast their gods, *deos conflantes*, and God forbade his people to imitate them upon pain of death. In the building of the tabernacle, the workmen did not invent the art of founding : God only directed their taste. It is said, that Solomon caused the figures used in the temple and elsewhere, to be cast near Jericho, because it was a clayey soil, in *argillosa terra* : which shows that they had even then the same manner of founding great masses as we have.

It were to be wished, that the Greek or Roman authors had informed us in what manner the ancients cast their metals in making figures.⁸ We find by what Pliny⁹ writes upon that head, that they sometimes made use of stone moulds. Vitruvius speaks,¹⁰ of a kind of stones found about the lake Volsenus, and in other parts of

6 Odyss. Δ. v. 73.

teness very difficult to work. It is now called Icelandic agate, and is proved to be a vitrified lava.—Ed.

7 The art of casting statues in bronze is of great antiquity, and was much practised in countries abounding in metals. If we can credit Diodorus Siculus, * Semiramis had bronze statues in her celebrated gardens, 1740 years before the Christian era. Antiquaries give the name of bronze to all the relics of antiquity which consist either of pure copper or compounds of that metal with tin. Their general term is *Xalasc*. Copper as well as brass was for a long time called *Æs*; but later mineralogists, in order to distinguish them, gave the name of *cuprum* to the former. In by far the greater number of instances the Latin term *Æs* may be translated *brass*; for brass, which is compounded of copper and zinc, was not the metal used by the ancients in their statues. It was a copper mixed with fine tin. They possessed the art of giving such a degree of whiteness to copper as to make it resemble silver. † Iron has likewise been combined with copper, in very ancient statues.

The Etrurians were early masters of the art of casting in bronze. In the eighth Olympiad Romulus placed his statue, crowned by victory, on a car drawn by four bronze horses, taken from Cameria, which were Etruscan. A bronze genius, at Florence, of Etruscan workmanship, is so admirably worked to nature, that sculptors and painters have concluded that it must have been modelled upon the body of a young man. Between the thirtieth and fortieth Olympiad, Herodotus says that Rhæcus and Theodoros, who cast bronze statues at Samos, invented the moulds of clay, and Pausanias thinks that they were the first who cast statues at one jet. The European Greeks had wooden statues only in the sixty-first Olympiad. This circumstance rests on the testimony of Pausanias,‡ who tells us that no bronze statue escaped his notice, but that he had not found one by Theodoros, and only one by

Rhæcus, in the temple of Diana at Ephesus. Cleothenes, who had been victorious in the sixty-sixth Olympiad, was represented in a car with four horses, in bronze. After this period works in bronze were multiplied to an excessive degree.

Under Augustus, the art of casting in bronze began to decline, and the system of forming statues by hammering and rivets appears to have become prevalent. The representation of elephants, mentioned by Pliny, * were not cast, but beat out by a hammer. The colossus of Nero, 110 feet high, must have been formed of separate pieces, and joined by lamination. In the reign of Vespasian, the art of casting was not at all practised, but it was revived under Domitian, whose statue, on horseback, Celon, a Greek artist, cast. † It is said by Muratori, that there were twenty-eight colossal equestrian statues, and other horses in Rome, which were gilt, besides many others of plain bronze. ‡—Ed.

8 Bouffrand, in the *Encyclopédie des Arts et Metiers*, says, that the ancients did not take the trouble to make the first model of plaster, which serves to determine the thickness of the wax, but after having made their model with prepared potters clay, they skinned or stripped it, by taking off so much as would correspond with the thickness they intended to give to their bronze, so that their model became their nucleus. According to Philo of Byzantium,‡ the ancients never made any large statue of one jet, " simulachra artificis primum finguntur, deinde membra diversa conflant, tandem omnia bene, composita erigunt." He remarks, respecting the colossus at Rhodes, that it was cast in pieces, first of all the legs, which were lowered into the ground; upon these the thighs were then cast hot and united, and this process was pursued with the rest of the figure. The ancients were apprehensive lest in casting a very large mass the metal should cool, but modern experience has shown that it will pass over a space of forty feet without fixing. In the practice of the ancients, the same mould must have served for many statues. Lysippus made 610 similar pieces of bronze sculpture, which he could not have done, unless he had known an expeditious mode of getting at the casts without breaking the moulds. ||—Ed.

9 Plin. l. xxxvii.

10 Vitruv. l. ii. c. 7.

* Lib. ii. 50.

† Pausanias, lib. v.; L'Essai sur l'art de la Fonte des Anciens, avec quelques remarques sur les Chevaux de Chio, par J. Seitz.

‡ Lib. x. c. 38.

* Lib. xxxvi.

† Statius in Sylvio, lib. i. For the bronze of Septimius Severus, see Winkelmann Lettere, p. 120.

‡ Nov. Thesaur. vol. i.

§ De Septem Orbis Miraculis, c. v. p. 13.

|| See Gauricus de Sculptura.

Italy, which would bear the force of fire without breaking, and of which moulds were made for casting several sorts of works. The ancients had the art of mingling different metals in the mould, to express different passions and sentiments by the diversity of colours.¹

There are several manners of carving metals and precious stones: for in both the one and the other they work in relief, and in hollow, which is called engraving. The ancients excelled in both ways. The basso relievo, which we have of theirs, are infinitely esteemed by good judges: and as to engraved stones, as the fine agates and crystals, of which there are abundance in the king of France's cabinet, it is generally said, that there is nothing so exquisite as those remains of the ancient masters.

Though they engraved upon almost all kinds of precious stones, the most finished figures, which we have of theirs, are cut upon onyxes, which is a kind of agate not transparent, or on cornelians, which they found more fit for engraving than any other stones, because they are more firm and even, and cut more neatly; and also because there are different colours that run one above the other in the onyx, by the means of which in relieve the bottom continues of one colour, and the figures of another. To engrave upon gems and crystals they used, as now, the point of a diamond.²

I Plin. l. xxxiv. c. 14.

2 It is probable that no stone of sufficient hardness was excluded from receiving the engravings of the ancients; but it has been doubted whether they were acquainted with the means of cutting the diamond, or sculpturing the emerald and topaz. Their most favourite stones for engraving, as stated in the text, were the cornelian and onyx. The former is of different shades, from cherry red to flesh colour, and sometimes of a yellowish tinge or brownish colour; but exposed to moderate heat it becomes white. It was obtained from India, Arabia, and other parts of Asia, as well as the Mediterranean islands. The latter is considered a calcedony, the colours of which are disposed in alternate zones or strata. Generally they do not exceed two or three; five or six are extremely rare. The proper gems of onyx consist of parallel zones, as these only can be worked to advantage; but there are other two varieties with undulated zones, or concentric nuclei, resembling the eye of animals. It is not known where onyx was obtained by the ancients, but it is now found principally in Germany and Scotland. The largest onyx said to exist is an oval of eleven inches by nine, on which is sculptured the apotheosis of Augustus in four zones, two of which are brown and the others white. Several stones of the same species have attracted the particular notice of antiquaries: such is the Brunswick vase six inches in height, representing Ceres in quest of Proserpine; Venus on a marine animal surrounded by Cupids, engraved upon an onyx of two zones; Marcus Aurelius and Faustina in one of four zones, two of white, and two of lilac. Engraved gems of two colours, as the onyx, are called *camceæ*, a word of uncertain etymology—more usually, however, applied to such subjects as are in

The ancients highly extolled the gem in the ring of Polyerates, tyrant of Samos, which he threw into the sea, and which was brought back to him by a very extraordinary accident: in

relief or elevated; while all hollow engravings are called *intaglio*, a name adopted from the Italian.

The Egyptians had gems both in intaglio and relief, but more commonly the former; and those preserved are for the most part called *scarabei*, from the figure resembling a beetle being engraved upon them. The Jews perhaps learned engraving from the Egyptians among whom they dwelt; and some notices respecting it are preserved in sacred writ. In the book of Genesis, Bezaleel and Aholiab are mentioned as being professedly engravers, and are designated as "filled with wisdom of heart to work all manner of work with the graver, as well as to devise cunning works; to work in gold, and in silver, and in brass, and in cutting of stones, and to set them." Of the jewels which were in the ephod, Moses was directed to take two onyx stones and grave on them the names of the children of Israel, six of their names on one stone, and six on the other, according to their birth. "With the work of an engraver on stone, like the engravings of a signet, shalt thou engrave the two stones with the names of the children of Israel."

The Greeks, before the decline of their own country, and afterwards when their artists were under the patronage of the Romans, have been much more eminent for their gems than all the other nations of antiquity. They practised seal-engraving at a remote period; for we are told that a law of Solon prohibited engravers from keeping or making copies of seal-rings; and Mnesarchus, the father of Pythagoras, was a seal engraver. The names of many celebrated artists are preserved on their works, which M. Millin, a learned antiquary, has endeavoured to arrange in chronological order—an undertaking of much difficulty, and one that can never be free of doubt. The catalogue given by him of the Greek and Roman engravers being long, we can only make a brief excerpt from it. Those who flourished anterior to the era of Alexander, he supposes, were Theodore of Samos, Mnesarchus, Helus, Phrygillus, and Thamytos. Between the era of Alexander and the Augustan age are enumerated, Pyrgoteles, Admone, Apollonides, Polycletes, the statuary, Tryphon, and others. They become more numerous on descending later: Aulus, Chronius, Dioscorides, Alphaeus, Ehrodus, Antiochus, Epollan, &c. Of those whose exact era cannot be ascertained, the most celebrated are: Aetian, Agathemeros, Allion, Apollodorus, said to be the first engraver who added his profession to his name, Pamphilus, whom some have supposed a pupil of Praxiteles, and who engraved upon an amethyst Achilles playing on a lyre, Teucer, Carpus, and others, whose names would protract the catalogue to a great length. Among the Roman artists, M. Millin includes all those whose names do not appear of Greek origin, or are written in Latin; such as, Aquilus, Felix, Quintillus, Rufus, and a few more. The Greeks preserved their taste for engraving on fine stones during the earlier part of the darker ages, nor was it entirely obliterated from among the Romans, until the doctrines of Christianity, which were adverse to the art, from discountenancing images, had gradually spread over the western empire.

The ancients entertained a great partiality for rings; loading their fingers, in the words of Pliny, with extravagant wealth, *censu opimo digitos onerabant*; and these

* Millin's Dict. des Beux Arts, article *Glyptique*.

Pliny's time it was pretended to be at Rome.³ It was, according to some, a sardonxy, to others an emerald. That of Pyrrhus was no less esteemed; upon which might be seen Apollo with his harp and the nine muses, each with their particular symbol: and all this not the effect of art but of nature: *non arte, sed sponte natura*.

The art of sculpture was principally employed upon cups used at feasts: these pieces were very rich and curious, as well as of the most costly materials.

One of the greatest advantages the art of making portraits ever received for the eternizing

3 Plin. l. vii. c. 1.

rings, as we have seen, contained either natural jewels or engraved gems. Most probably, numerous cameos were worn in the same way, merely for ornament, and cutting them might simply be a display of art in miniature, as sculpturing a statue or painting a picture. During some time there was an ordinance of the Roman emperors prohibiting the use of rings bearing their portraits, the infringement of which was little less than a capital crime, and we are told of the prætor Paulus being exposed to imminent danger, from having a cameo representing the emperor Tiberius. Vespasian wisely removed this restriction. Augustus sealed with the head of Alexander, and then substituted his own, engraved by Dioscorides. Before resorting to either, he had sealed with a sphinx. Nero is said to have had a seal engraved with the subject of Apollo slaying Marsyas; the seal of Pompey represented a lion holding a sword; and the emperor Galba retained the seal of his ancestors, representing a dog on the prow of a vessel. Sylla, proud of the capture of Jugurtha, caused a representation of the king Bocchus delivering up the prince, to be engraved on a ring which he wore on his finger, and always sealed with it; and Scipio Africanus did the same, to commemorate one of his conquests.

The art of die-sinking for stamping coins, though by no means of so early a date as the engraving of seals, was practised at a very early period. It is uncertain whether the coining of money was invented by the Greeks or Lydians, though some suppose that the art was brought from Hindostan. The first Greek money is supposed to have been struck by Phidon, king of the Argives, whose reign is fixed by the Arundelian marbles at about eight centuries before the Christian era, or soon after the age of Homer. Many of the early Greek and Sicilian coins are beautiful and in high relief: to this, however, the coins of Athens form a remarkable exception, being in a very inferior style of execution. This art seems to have been communicated to the Romans in the reign of Servius Tullius, about 600 years before the commencement of our era, by the Lydian colony settled in Etruria. The best of the Roman medals are the work of Greek artists, executed during the reign of Hadrian.

Satisfactory information on the subject of ancient gems and engraving will be found in the following works: *Gemmae Antiquæ, ex Thesouro Mediceo Francisci Gorii*, 1721—32, 2 tom. fol.; *Traité des Pierres Gravées, par Marnette*, 1760, 2 tom. fol.; *Phil. Lipperti Dactyliotheeca universalis Chylades tres, Lipsiæ*, 1755 and 1762, 4to; *Description des Pierres Gravées du Baron de Stosch, par Winkelmann*, 1760, 4to; *Traité de la Méthode Antique de Graver en Pierres Fines, par L. Natter*, 1760; *Sur l'Art Glyptographique des Anciens, par M. le Comte de Caylus*: *Acad. des Inscript. tom. xxxii.—Ed.*

its works, is that of engraving, upon wood and copper-plates, by the means of which a great number of prints are taken off, that multiply a design almost to infinity, and convey the artist's thought into different parts, which before could only be known from the single piece of his own work. There is reason to wonder, that the ancients, who engraved so many excellent things upon hard stones and crystals, did not discover so fine a secret, which indeed did not appear till after printing, and was, no doubt, an effect and imitation of it. For the impression of figures and cuts did not begin to be used till the end of the fourteenth century. The world is indebted for the invention of them to a goldsmith, that worked at Florence.⁴

After having related, by way of abridgment, the greatest part of what employed the sculpture of the ancients, it remains for me to give an account of some of those, who practised it with most success and reputation.

SECT. II.

Sculptors most celebrated amongst the ancients.

Though sculpture had its birth in Asia and Egypt, it was from Greece, properly speaking, that it derived its lustre and perfection.⁵ Not

4 Rollin here alludes to Thomas Finiguerra, a goldsmith of Florence, who, about the year 1460, having engraved some figures on a silver plate which he intended to enamel, in order to try the effect of his work, poured upon the plate some liquid sulphur, and the dirt or black lodged in the crevices adhering to the sulphur, produced an impression like a pen drawing, and suggested to him the idea of an impression upon paper, in which he ultimately succeeded. Before this, however, the art of taking impressions upon paper from blocks of wood, by means of the printing or rolling press, was known to the Germans, and seems to have originated with the *brief malers*, or makers of playing cards, who at first coloured or illuminated their figures with the hand; but afterwards performed the operation in a much more expeditious manner by blocks cut for the purpose, each colour requiring a separate stamp.—*Ed.*

5 Although it is not necessary to suppose that the Greeks were indebted to foreign nations for the rudiments of sculpture, it has been generally considered, that the arts of design were introduced among them by the early settlers from Phenicia and Egypt. It is certain, at any rate, that sculpture must have been practised by the Greeks as far back as the age of Homer, as we find in his poems several allusions to minute and curious workmanship. His description of the shield of Achilles, * the bowl of Helen, and the belt of Hercules, † allows a conjecture, that the art of graving and casting metals had reached a certain degree of perfection when the *Iliad* was composed. Shields and bucklers, if we may regard the testimony of the poets, were constantly adorned with various figures in bas-relief, even in the heroic ages.

* Il. 2. v. 478.

† *Odyss. l.*

to mention the first rude essays of this art, which always carry with them the marks of their infantile state, Greece produced, especially in the time of Pericles and after him, a multi-

tude of excellent artists, who laboured in emulation of each other, to place sculpture in honour by an infinite number of works, which have been, and will be, the admiration of all ages.*

If the Greeks derived from the Egyptians the rudiments of the arts, they have the unquestionable honour of carrying them, in a few centuries, to such wonderful perfection as entirely to eclipse the fame of their masters, and as far as regards the representation of the human form, in its most elevated acceptation, of leaving specimens of their genius, which succeeding ages have not been able to equal. The unrivalled excellence to which they attained in the art of sculpture may be ascribed to various causes, of which their political institutions, their personal beauty, and their mythology, were the chief. While, unlike the Egyptians, they had no restrictive laws, to check the improvement of sculpture, they had every inducement to cultivate its practice, for a statue was the highest honour which public merit could attain. Not only were the persons of the Greeks beautiful by nature, but their gymnastic exercises were calculated to improve their form, and afforded opportunities to their artists of observing the human frame in its most perfect freedom, elegance, and grace, and in every variety of attitude and action. Admirable, however, as their models were, the Grecian sculptors did not rest contented with taking exact representations even of the most august and beautiful. Their sense of beauty lay too deep to allow them to be satisfied with the graces even of these; and the nature of their religion, which required to be embodied in distinct and definite forms, led them to brood over the *idea* of perfection in shape, until they were capable of presenting it palpably before mankind, in objects which have been the wonder and admiration of every successive generation. Hence their noblest productions have given indications of a beauty more complete than nature herself in any of her individual works has supplied. This triumph of art is one of the most striking proofs of the high origin and glorious destiny of our species. Man has executed imperishable monuments, which show that in the soul there exists a sense of loveliness, beyond even that everywhere exemplified in the wonderful embellishments of its material abode, and that, admirably as the earth and the human frame are constructed, there is in the heart a reaching forth after beauties and sublimities still more astonishing and harmonious than these. In the highest efforts of art, the goodness and power of HIM who formed the soul of the workman are, to a philosophic contemplation, more signally displayed than in those things of which He is the more immediate author, because they are manifestations of that genius which He has breathed into the spirit, and which, in its aspirations, evinces a constant struggle towards a better and more perfect state.

Winkelmann has assigned four different styles to sculpture in Greece:—The *ancient* style, which continued until the time of Phidias; the *grand* style, which was impressed on the art by that celebrated statuary; the *beautiful*, introduced by Praxiteles and Lysippus; and the *imitative* style, practised by those artists who copied the works of the ancient masters. The statues of the ancient style were neither distinguished by beauty of shape nor by proportion, but bore a close resemblance to those of the Egyptians: the eyes were long and flat; the section of the mouth not horizontal; the chin pointed; and the curls of the hair ranged in little rings. The most authentic monuments of this style are medals, containing an inscription from right to left in the Hebrew manner—a usage which was abandoned before the time of Herodotus. The *grand* style preserved some characters of the ancient manner, such as the straight lines, the square

I Multas artes ad animorum corporumque; cultum nobis eruditissima omnium gens (Græca) invenit. *Liv.* l. xxxix. n. 8.

and angles, and sacrificed some degree of the form of beauty to magnificence and effect. The graceful or beautiful style was obtained by avoiding the square forms which the masters of the second style had too much employed, and aiming rather to please than to astonish. The imitative style had no peculiar characteristic, except a general inferiority to those works which it attempted to copy.

As *style*, however, is not always a sufficient proof of the age of any individual production, and as there is likewise a singular discordance in the opinions of certain authors respecting the characteristic merits and defects of particular eras, it will be necessary, in order to obtain a distinct view of the state of sculpture in Greece, from its rise to its decline, to trace, in chronological order, the history of its more celebrated artists, stating, at the same time, as far as possible, their principal works and distinguishing characteristics. Rollin has confined himself to the notice of six sculptors, namely, Phidias, Polycletus, Myron, Lysippus, Praxiteles, and Scopas, and so far as he has gone, our labour, of course, will be lightened; but, for the sake of preserving the chain unbroken, we shall, in the following enumeration, take care, notwithstanding, to give these a place, in their several orders, with such additional notices respecting them as may have escaped our author, or may have been obtained by recent investigations. †

DEDALUS, † the Athenian, is the first A. C. 1400. name we meet with among the sculptors of Greece, and is generally reckoned the patriarch of Grecian art. The adventures and works ascribed to him, however, are so marvellous, that it is difficult to ascertain how far any statement respecting him is worthy of reliance. He is said to have discovered the properties of the wedge, and other important instruments; to have applied glue to purposes of building; and to have given masts and sails to ships. He is said, also, to have introduced quicksilver into the cavities of his images, so as to cause them to assume grotesque motions and attitudes. It appears that, in comparatively modern times, there were works ascribed to Dædalus in existence. Pausanias affirms that nine of his pieces were remaining in Greece in his age. The chief of these was a statue of Hercules in wood, which was “rudely executed, but had a certain air of divinity.” ‡ A chorus, in white stone, of youths and girls dancing hand in hand was alleged by the Grecians, who possessed it, to be his work, and the same is mentioned in the eighteenth book of the *Iliad*.—ENDÆUS, a pupil of Dædalus, made a statue of Minerva, which Pausanias saw in the Acropolis, at Athens.

After Dædalus and Endæus, with the exception of SMILAS, of whom nothing is known, no name occurs in

* Among the ancients Varro, Pliny, and Pausanias, and, incidentally, Cicero and Quintilian, furnish the clearest information regarding Grecian sculpture. Several passages on the subject will also be found in Lucian, Athenæus, Strabo, Anthologia Brunckii, Callistratus, and Clemens Alexandrinus.

† Fine sculpture of any kind is called by Homer, “*Δαίδαλα*.” *Il.* E. v. 60, and *Æ.* v. 179. Pausanias confines the expression to works in wood and stone. Dædalus is personified by Virgil. *Æn.* lib. vi. v. 14—33. His voyage and adventures in Crete are well known.

‡ Pausan. lib. ii. c. 4.

Attica, fertile in quarries of marble, and still more abundant in happy geniuses for the arts, was soon enriched with an infinite number of statues.*

2 Exornata eo genere operum eximie terra Attica, et copia domesticæ marmoris, et ingenio artificum. Liv. l. xxxi. n. 26. These marbles were dug in the Pentelie mountain, which was in Attica.

the annals of Grecian art for a period of above six hundred years.

RHŒCUS, a native of Samos, is the first sculptor, whose date may be placed after the siege of Troy. Pliny* says, that he flourished before the Bacchiades were expelled from Corinth. He is said to have been the first who wrought in brass, and to have invented the art of modelling. He was also an architect, and built at Samos the largest temple noticed by Herodotus.

TELECLUS, the son, and THEODORUS, the grandson, of Rhœcus, were the earliest artists of the Samian school.† They studied in Egypt, and were probably imitators of the Egyptian manner previously to that admirable improvement in the art which distinguished the Greeks. Some confusion has occurred between this Theodorus, and another later one highly celebrated by Pliny for the exquisite minuteness and delicacy of his work. As the art of fusing or rather forging bronze was introduced or invented by Rhœcus, it gained considerable improvement in the school of his descendants. Pausanias, who records them, observes that their bronze statues were composed of the members distinctly, which were afterwards rivetted together.

DIPENUS and SCYLIS were brothers and natives of Crete. They went to Sicily to exercise their art, as that place was the great workshop of Greece, and were there employed in framing images of the gods for public temples. It is said, by Pliny, that the works of Dipenus abounded in Atrabria, Argos, and Cleone, "in which cities a man could not see a corner without them." Up to this period the plastic arts seem to have made very little progress towards perfection.

BUPALIS and ATHENIS, brothers, of the isle of Chios, were the first, or among the first who used marble in preference to wood or bronze. They wrought, for the most part, in concert, and are said to have succeeded in framing many celebrated statues. They seem to have descended from a family of sculptors, as their great-grandfather MELAS, their grandfather MICIADAS, and their father ANTIHEMUS, all practised the same art. Of these ancestors, however, nothing more is known but the names.

A period of more than twenty Olympiads elapsed from the era of Bupalus to that of Phidias, during which a few artists only are recorded to have distinguished themselves. It included the date of the ancient style;—the *rudis antiquitas* of Pliny;—yet of these artists an exception is made by Dionysius of Halicarnassus, in favour of CALAMIS and CALLEMACHIUS, who are praised for the lightness and elegance of their works. By the latter is a bass-relief of Bacchanals, inscribed with his name in the capitol at Rome. Several iconic statues of athletes preceded the works of Phidias. To have gained three prizes in the

I shall mention here only such of them, as were most distinguished by their ability and reputation. The most celebrated are Phidias, Polyclethus, Myron, Lysippus, Praxiteles, and

games of Olympia and Nemea was sufficient to entitle the victor to the honour of a statue scrupulously modelled after his own person.—DAMEAS of Crotona Olymp. 67. made a portrait or iconic statue of Milo the athlete, which he is said to have carried on his shoulders to Altis, where it was set up. PYTHAGORAS of Rhegium is praised by Pausanias on account of his statue of Enthyemus the pugilist, and many other of his works are A. C. 409. likewise enumerated. *—OF AGELEADIS, his contemporary, the master in whose school Polyclethus and Myron studied with eminent success, nothing is known.

At length arose PHIDIAS, who infinitely surpassed all that had gone before him, and A. C. 457. raised sculpture to a height of which his predecessors could have entertained no conception. Like the great tragedian Æschylus, if he did not actually invent his art, he first made it a vehicle for the development of the noblest ideas and the loftiest conceptions. His forerunners appear to have done little more than to have framed the weapons, by the aid of which he was able to manifest the utmost sublimity of thought which human skill has been able to embody in definite and circumscribed forms. The Greek authors are scarcely able to discover epithets sufficiently lofty to express their admiration of his great talents. They compare him to Thucydides and Demosthenes. † Equally ingenious and sublime, he imitated great objects with energy, and small with fidelity. ‡ He worked with equal facility and success in bronze, ivory, and marble. Iconic statues did not appear sufficiently important for his genius: he devoted himself chiefly to ideal and elevated subjects, and was most happy in the representation of the deities, to which he gave an air of celestial dignity. || Of his life and works Rollin has been sufficiently descriptive.

The principal sculptors immediately contemporary with Phidias, were Alcámenes, Agoracritus, Ctesilaus, Critias, Nestocles, and Hegias. There are, however, occasional inconsistencies in the accounts given by Pliny respecting the precise time when some of these flourished; as, although he expressly makes ALCAMENES contemporary with the earlier part of the age of Phidias, he represents him as having been his pupil. If we suppose this to be the same Alcámenes whom Phidias overcame in the contest, by his superior skill in optics, as related in the text, the circumstance will tend to shake the assertion that he was the pupil of his adversary; for it is probable that the contest occurred at the commencement of the career of Phidias, before he was appointed to superintend the public works by Pericles, and before he had completed his own studies. It appears, however, from every authority, that Alcámenes was one of the most distinguished of the contemporaries of Phidias. His most celebrated work was a statue of Venus, called Aphrodite, which was

* PAUL. I. vi. c. 4. Plin. I. xxxiv. c. 6.

† According to Heyne, who has made a diligent inquiry into the subject, the true era of Phidias was somewhat earlier than that ascribed to him by Pliny, whom Rollin follows.

‡ Demet. Phaler. de Elocut. c. xiv. and xl.; Dion. Halicarn. de Antiq. Orat. in Isoc.; Quintil. de Orat. I. xii. c. 10.

§ Pausan. I. v. c. 2.; Martial. Epig. 33. Julian Imp. Ep. viii.

|| Quint. lib. xii. Pausan. lib. vi. c. 4. Plin. lib. xxxvi. c. 5.

* Lili. xxxv. c. 6.

† Pausan. I. lib. c. 12. I. viii. c. 14. I. x. c. 34. Herod. I. lib. c. 41.

‡ Winkelmann, Tract. Prelim. p. 63.

§ Plin. I. xxxiv. c. 19.

Scopas. There is another still more illustrious than all I have named, but in a different way: this is the famous Socrates. I ought not to envy sculpture the honour she had of reckoning

Socrates amongst her pupils. He was the son of a statuary, and was one himself before he commenced philosopher.¹ The three graces, which were carefully preserved in the citadel of

1 Diog. Laert. in Socr.

placed without the walls of the city of Athens, to which Phidias is supposed to have given the finishing touch. Besides his works in marble, he also made a Pantheon, in brass, which was called Eucrinomenos. As we are told by Pliny, that a great number of his works were remaining in Athens, it is probable that he had a large share in adorning the Parthenon, under the direction of Phidias.—AGORACRITUS acquired his art in the school of Phidias, who carried his affection for him so far as to allow some of his own pieces to be regarded as the productions of his pupil. He was a Parian by birth, and wrought in the marble for which his native island was famous. Pliny relates that the rival skill of Alcamenes and Agoracritus was exerted in finishing each a statue, and the palm is said to have been partially adjudged by the Athenians to the former. But the unsuccessful statue was altered into a Nemesis by Agoracritus, and obtained for him, under that denomination, extensive fame. So sudden a change from the goddess of Beauty to that of Vengeance, proves that the ancients represented even their most terrible divinities with an enchanting form. M. Varro prefers this Nemesis to all other statues. Its sculptor was also celebrated for an excellent image of Cybele, placed in a temple at Athens. The great bas-relief, representing the battle between the Centaurs and Lapithæ, on the outside of the temple at Olympia, were by Agoracritus.—CTESILAUS, jointly with Phidias, finished one of the three Amazons designed to decorate the temple of Diana at Ephesus, and also the bronze statue of Pericles, commended by Pliny. * The statue called the Dying Gladiator is supposed to be a copy of a bronze by this artist.—OF CRITIAS, NESTORUS, and HEGIAS, little is known. The latter made statues of Minerva, and of Castor and Pollux, which were placed before the temple of Jupiter the Thunderer; and figures of youths called Celizantes.—About this time, NAUCYDES of Argos was distinguished for an iconic statue of an athlete holding a discus, and appearing to meditate to what distance he should throw it; † and STROMILION was celebrated for his statues of animals in bronze, wrought from living models. ‡

In the latter part of the age of Phidias, a considerable number of artists rose to great excellence. Olymp. 87. Of these, POLYCLETUS of Sicyon appears to A. C. 429. have been the chief. As Phidias has been denominated the *Æschylus*, this artist may, with propriety, be regarded as the Sophocles of sculpture. He did not possess the grandeur of imagination of Phidias, or attempt, like him, to create images of the most powerful deities; but he manifested an equal aspiration after ideal beauty, and particularly excelled in representing the sweet and tender graces of childhood. He seems to have laboured to render his statues perfect in their kind, by the most scrupulous care in the finishing. Of his celebrated works the chief were, the *Apoxomencos*, or athlete in the act of scraping his leg with a strigil; a delicate young man, styled, *Diadumenos*; two naked boys called *Astragalizontes*; and the Juno of Argos, or rather of Mycenæ, which, according to Strabo, was a sitting figure

larger than life, wrought in ivory and gold, and adorned with a crown, on which the Graces and Hours were represented. The statue called the *Rule or Canon*, mentioned in the text, is by some supposed to have been the work of another Polycletus, who flourished at Argos about the 70th Olympiad, but of whom nothing is known. The present Polycletus taught the Torcutice or art of basso-relievo in metals, and extended and improved the practice of it. He discovered the balancing of figures on one leg, and is said to have been so partial to this mode of representing the human form, that he almost invariably adopted it in his statues.

MYRON was contemporary with Polycletus, and, like him, was the pupil of Agelidas. He wrought both in brass and marble. By him the iconic statues were brought to the greatest perfection. His figure of Ladas, the foot-racer, was a master-piece of perfection. * The other works, by which he was most celebrated, were, the brazen heifer, mentioned by Rollin in the text; the Diacubolus, of which there is an ancient copy in the British Museum; the tomb of a grasshopper and locust, in brass, mentioned by Erinna, the poetess; Perseus slaying Medusa; a satyr admiring the music of the pipes; sawyers, called *Pristæ*; the figure of an old drunken woman, in marble, made for the people of Smyrna, and held in the highest estimation; a statue of Minerva; the Delphic Panthali and Pancratiste; a Hercules, which was afterwards conveyed to Rome, and placed in the great circus of Pompey; and an Apollo, which Mark Antony took from Ephesus, and Augustus Cæsar restored, in consequence of receiving a warning to that effect in a dream. †

PYTHAGORAS of Samos was another celebrated sculptor of this period. He is said to have been originally a painter, and hence acquired the faculty of giving accurate resemblances of individual faces, in which he was singularly successful. He made a figure of an old man, and seven naked statues of the goddesses, which have been spoken of in terms of high eulogy.

SCOPAS, though placed by Pliny, Olymp. 100—107. and Rollin after him, as contemporary A. C. 377—349. with Phidias, seems, according to the best authorities, not to have flourished till a somewhat later period. This is confirmed by the circumstance of his having been employed (as stated in the text) by Artemisia, queen of Caria, in framing the splendid monument to the memory of her husband Mausolus; for Mausolus did not die till the 100th Olympiad. Scopas was an architect as well as a statuary, and equally eminent in each. He was appointed to contribute one of the columns to the temple of Diana, at Ephesus, and that which he framed was regarded as the most beautiful of the whole. His statues were numerous: among the most remarkable was, a group of three deities, whom Pliny calls Venus, Pythos, and Phæton, which was held in the greatest veneration by the Samothracians. ‡ Many

* Paus. l. ii. c. 19; Anthol. l. iv. c. 2.

† Lucian de Imag.; Cicero in Verrem, l. iv.; Quintil. lib. xi. c. 14; Plin. Nat. Hist. l. xxxiv. c. 19, and l. xxxv. c. 4.

‡ It is a circumstance singularly gratifying to the lovers of sculpture in this country, that a statue of the Town-lean Collection has been lately identified by the Dilettanti Society of London, as far as well-founded conjecture can go, to be the genuine Venus of this group, and is therefore deservedly ranked as one of the most precious monuments of Grecian art now extant.

* Lib. xxxiv. c. 8.

† Pausan. l. vi. c. 6 and 7. Plin. l. xxxiv. c. 8. Statius Thebaid. l. vi. 603. Three copies of this celebrated statue have been discovered near the villa of Hadrian, and restored, of which the most perfect is in this country.

‡ Pausan. l. ix. c. 30. Ælian Varr. Hist. l. ix. c. 32.

Athens, were generally ascribed to him. They were not naked, as it was usual to represent them, but covered: which shows, what inclination he had at that time for virtue. He said,

that this art had taught him the first precepts of philosophy; and that as sculpture gives form to its subjects by removing its superfluities, so that science introduces virtue into the heart of

of his compositions were among the noblest ornaments of Rome, in the days of Pliny. An Apollo of his workmanship stood on the Palatine mount; a Vesta seated, with two female attendants sitting on the ground beside her, adorned the gardens of Servilius; and a group of the same description, with a virgin bearing on her head a basket of relics, were preserved in the collections of Asinius Pollio. His statues, also, of Neptune, of Thetis, and Achilles, of the Nereids riding on the monsters of the deep, were highly prized, and placed in the chapel of Cneius Domitius, in the Flaminian circus. A colossal image of Mars, and an exquisite statue of Venus, were also greatly admired at Rome; the latter was preferred to a similar statue by Praxiteles, which has been thought to have furnished the original idea of the Venus de Medici. It is uncertain whether the celebrated group of the Niobe,—wherein is manifested that intense feeling of beauty which the Grecian artists delighted to preserve in the midst of suffering,—be the production of Scopas or belong to a later age.* Winkelmann is of the former opinion, and supposes it to be the same mentioned by Pliny,† as having been in the temple of Apollo Sosianus at Rome. In the group, there are fifteen figures as large as life, namely, a pedagogue, or tutor, the mother, and her thirteen children. When first discovered, which was about the year 1583, without the Porta St. Giovanni at Rome, it was purchased at a small price, and placed in a garden; and the noble simplicity, grace, and expression which characterise the figures were almost entirely overlooked, until Winkelmann attracted the notice of connoisseurs to the group by his poetical and animated description of it, and the exact coincidence he pointed out between it and the Niobe of Homer and Ovid.‡

The associates of Scopas in adorning the tomb of Mausolus were celebrated not only as architects, but as sculptors. TIMOTHÆUS was the framer of an admirable statue of Diana, preserved in the temple of Apollo, on Mount Palatine; BRYAXIS was renowned chiefly for his statues of Æsculapius and Seleucus; and LEOCHARÈS is praised by Pliny for a group of Ganymedes.

PRAXITELES was the first sculptor Olymp. 111—123. who gave to the ideal image of Venus A. C. 338—295. all the attractions of beauty, and that perfection which had been sketched out by Scopas. Of the two figures of Venus which were made by him for the statues of Gnidus and Cos, the naked one, according to general opinion, is the prototype of the Medicean. The other works by which he was celebrated were—a Sauroctonus, or youth in the act of killing a lizard; a Satyrus or Faun; a Cupid; and a statue of Phryne. The stratagem adopted by Phryne in obtaining the Cupid, as related in the text, is one of the few anecdotes concerning ancient statuary which have reached our days.

LYSIPPOS of Sicyon was contemporary with Alexander the Great, and the statuary whom he is said to have preferred before all others of his age. Lysippus excelled in

seizing the resemblance, and giving the features an extraordinary animation. If, as Pliny states, his works were so numerous as to amount to six hundred and ten, we have the more to regret that they were all of bronze, and are irretrievably lost. Besides portraits of Alexander of every description and proportion of statuary, he made 21 equestrian figures of Alexander's guards, who perished at the river Granicus. Metellus transported these to Rome, where was likewise an Apoxyomenos, differing probably in attitude or character from that by Polycleus, which was so greatly admired, that Tiberius removed it from before the baths of Agrippa to his own palace, but was forced by the remonstrances of the people to restore it to its former station.§ The four bronze horses, first brought from Chios to Constantinople by the younger Theodosius, thence to Venice, and recently to Paris, are attributed to Lysippus with no better proof than tradition, for their workmanship would derogate greatly from his fame.

CHARÈS is known to have been a favourite scholar of Lysippus, from a passage in Cicero.† To him is attributed a statue of Apollo, the colossus of Rhodes, which tradition, in order to increase its pretensions to be considered as the seventh wonder of the ancient world, states to have strode over the Rhodian harbour. Pliny;‡ says, that it was nearly a hundred feet in height, that the thumb was larger than most men could embrace, and that it was thrown down by an earthquake 56 years after its erection. It was completed in twelve years, and at the expense of three hundred talents.§ So partial were the Rhodians to this description of sculpture, that not less than one hundred colossal statues were to be seen in their island.

No authentic documents remain by which the age of AGEANDER, POLYDORUS, and ATHENODORUS can be certified; but it is known that they were Rhodians. To them the celebrated group of Laocoon and his two sons perishing by the bite of serpents, is assigned by Pliny,|| who states it to be then extant in the palace of Titus at Rome. Laocoon is represented as a robust old man, under the greatest bodily torment. In the extremity of his suffering, he preserves in his countenance and his very attitude an elevation and dignity of character. Virgil degrades the subject by making him roar like a bull; but the sculptor has opened his mouth only enough to give an idea of suppressed suffering. In the marble the breast is expanded and the throat contracted, to demonstrate that the agonies which convulse the frame are borne in silence. Winkelmann¶ conjectures, that Ageander was the father of Polydorus and Athenodorus, and finished the Laocoon, which is the most difficult figure, whilst those of the two youths were left to his sons. By the Dilettanti Society of London the group is supposed to have been executed between the years 300 and 350 A. C., "because it has too much freedom and laxity to be anterior to Lysippus, and too much vigour and spirit to be

* The finest fragment of Greek sculpture now preserved in England is a head of Niobe similar to that above named, in which maternal tenderness, regal pride, and earnest supplication are expressed with all the impassioned energy of strong feeling, but without any distortion or deviation from perfect beauty.

† Lib. xxxvi. c. 3.

‡ Illad. xxi. v. 623. Ovid. Metam. l. vi. Fab. 4.

• Plin. l. xxxiv. c. 8.

† Rhet. ad Herennium, l. iv.

‡ Lib. xxxiv. c. 7.

§ £67,500 Sterling, according to Falconet, reduced from French livres, but Arbutnot says only £58,120.

|| Lib. xxxvi. c. 5.

¶ Storia della Arti, p. 327. Em. David Rechercher, pp. 373, 394.

man, by gradually retrenching all his imperfections.

PHIDIAS.

Phidias, for many reasons, deserves to be placed at the head of the sculptors. He was an

much later." The French antiquaries, however, hold a different opinion, and place its age so low as the reign of Titus, in the first century of the Christian era. *

At the same period in which the sculptors of the Laocoon flourished, APOLLONIUS, and TAURISCUS are conjectured to have completed that vast group, called the Farnese Bull, which was discovered near the Antonine baths in the time of Paul III., and which had remained for a long time unnoticed in the Farnese Palace. Dirce is represented in the act of being bound to the horns of the enraged animal, in order to precipitate her into the sea, by Zethus and Amphiion, the sons of the repudiated Antiope, who is likewise there, and a fifth figure of a young man sitting, who expresses horror at so cruel a punishment. Upon the plinth, now obliterated, was traced the name of Menecrates, the master of Apollonius and Tauriscus. We are told that this vast mass of sculpture was formed out of a single block in the Island of Rhodes, whence it was brought to Rome by Asinius Pollio. †

After the death of Alexander, Greece lapsed into a state of dependance little better than slavery. From the 120th to the 150th Olympiad, Pliny considers the art of sculpture to have been dormant, and not to have revived before the last mentioned epoch. This cessation was probably occasioned by the fluctuation of government in Greece under the successors of Alexander. In the wars under Pericles the sculptors were animated by the love of liberty and of their country, and exerted all their energy in forming the statues of their victorious chiefs, or of those who fell in battle; but in the contest for power which took place immediately on the death of Alexander, as the Greeks soon perceived that they were fighting only for a change of tyrants, their national spirit was broken and the arts were neglected. ‡ The unsuccessful struggles with Alexander's successors reduced Athens to the lowest degradation, and in this republic the practice of sculpture became almost immediately suspended; and the other free cities of Greece being also humbled and oppressed, and subsequently ruined and enslaved by domestic wars, the arts would have been entirely lost had not Ptolemy Soter in Egypt, Attalus and Eumenes in Pergamos, and the Seleucide in Syria, given encouragement to the Greek artists, by inviting them to their respective courts, and affording them that patronage and protection which was no longer to be found in their native land. When the Roman consul Quintus Flaminius deprived the Macedonian kings of their authority, and the intestine dissensions of Greece were appeased, the arts began to revive for a short time, during which flourished ANTHEUS, CALISTRATUS, POLICLES, ATHENEUS, CALLIXENUS, PYTHOCLES, PYTHIAS, and TIMOCLES, all of whom Pliny considers to be greatly inferior to their predecessors. But about forty years after Greece had been declared free by Flaminius, the Romans, wishing to establish a superiority over it, and jealous of the Achaean League, directed L. Mummius to lay siege to Corinth. The capture of that city, so famed as a repository of all that was

Athenian, and flourished in the 83d Olympiad, A. M. 5566, happy times, wherein, after the victories obtained over the Persians, abundance, the daughter of peace, and mother of arts, produced various talents by the protection Pericles afforded them. Phidias was not one of those artists, who only know how to handle the tools of their pro-

fect in the arts, provoked the avarice of the Roman conqueror, who restrained no excess of predatory violence. By transporting his many superb works of taste to Rome, to grace his triumph, he excited the admiration and cupidity of his countrymen. Verres, and other proconsuls, assuming the military power, pillaged the temples of Greece, to embellish their temples near Rome. * Three of the richest, that of Apollo at Delphos, of Æsculapius in Epidaurus, and of Jupiter at Elis, were ransacked by Sylla, who possessed himself also of the treasures of Mithridates. At the same time Syracuse was ravaged by Marcellus; Sicily by M. Scaurus; and Sparta by Muræna and Varro. In the desolation of Athens all Greece was involved. Thebes, Sparta, and Mycenæ, retained little more than their names. Magna Græcia and Sicily shared the general calamity: And thus by a barbarous and indiscriminate plunder, the seat of the arts was eventually transferred from Greece to the growing metropolis of the world. †

After this biographical enumeration of the eminent sculptors of Greece, it remains to describe the ancient specimens of art which have come down to modern times, but which have not been satisfactorily appropriated to any particular artist. As, however, any description of these would extend this note greatly beyond its limits, we can only refer the reader to the works enumerated below, ‡ (where ample information will be found regarding various collections of sculpture in this and foreign countries,) and satisfy ourselves with the mere mention of a few of the more celebrated statues still extant—as, the bronze equestrian statue of *Marcus Aurelius*, found in

* Liv. l. xxv. c. 40. Juv. Sat. viii. v. 87.

† Hor. Epist. lib. ii.

‡ Monumenta Vetustatis Kempiana et vetustis scriptoribus illustrata eoque vicissim illustrantia, 1780, 8vo. — Les Marbres de Dresde, par la Plat. Dresde, 1781, fol. — Marmora Taurinensia, cum dissertationibus et figuris, 1743, 2 tom. 4to. — Museum Florentinum, cum Observationibus Gori, et aliorum, 1731, 1762, fol. — Saggio Historico del Real Galleria di Firenze, per Giuseppe Benvenuti, Direttore, 1779, 2 vol. 8vo. — Tableaux, Statues, Bas-reliefs, et Caprices de la Galerie de Florence, et Palazzo Pitti dessinées par Wicar et publiées par M. Masquelier, 1800, fol. — Marmora Oxoniensia, 1763. — Monumenti Gabini della Villa Pinciana descritti da Ennio Quirino Visconti in Roma, 1767. — Catalogue of the Pembroke Collection of Statues, Busts, Bas-reliefs, &c.; printed in the *Ades Pembrochianæ*; — Catalogo di monumenti scritti del Museo del Sig. Tomaso Jenkins, 1787, 4to. — Museum Worsleanum, or a Collection of Antique Baso-reliefs, Bustos, Statues, and Gems, Lond. 1794, 2 vol. — Catalogue of the Towneian Collection, printed in the *Anecdotes of the Arts in England*, 1800, 8vo. — Engravings and Etchings of the principal Statues, &c. in the Collection of Henry Blundel, Esq. 1809, 2 vol. imp. fol. — Greek Marbles brought from the shores of the Euxine and deposited at Cambridge by E. D. Clarke, L.L.D. 1809, imp. 8vo. — Specimens of Ancient Sculpture selected from different Collections in Great Britain by the Society of Dilettanti, Lond. 1809, imp. fol. — Memorandum of the pursuits of the Earl of Elgin in Greece, 1811, 8vo, and 1815; Lettre du Chev. Antonio Canova, et deux Mémoires lûs à l'Institut royal de France sur les ouvrages de Sculpture dans la Collection de my Lord Comte D'Elgin, par le Chev. E. Q. Visconti, 1815, 8vo; Report from the Select Committee of the House of Commons on Lord Elgin's Collection of Sculptured Marbles, 25th March, 1816.

* D'Hancarville Recherches sur l'Origine des Arts, li. pp. 145, 146.

† Plin. lib. xxxvi. c. 5.

‡ Guesco de l'Usage des Stat. P. II. c. v.; Heyne des Epôques, &c. p. 70.

fession. He had a mind adorned with all the knowledge that could be useful to a man of his profession; history, poetry, fable, geometry, and optics. A fact not a little curious, will show in what manner the latter was useful to him. Alcámenes and he were each employed to make a statue of Minerva, in order that the finest of them might be chosen, and placed on a very high column. When the two statues were finished, they were exposed to the view of the public. The Minerva of Alcámenes, when seen near, seemed admirable, and carried all the voices. That of Phidias, on the contrary, was thought insupportable: a great open mouth, nostrils which seemed drawn in, and something rude and gross throughout the whole visage. Phidias and his statue were ridiculed. *Set them, said he, where they are to be placed:* which was accordingly done alternately. The Minerva of Alcámenes appeared then like nothing, whilst that of Phidias had a wonderful effect from its air of grandeur and majesty, which the people could never sufficiently admire. Phidias received the approbation his rival had before, who retired with shame and confusion, very much repenting that he had not learnt the rules of optics.

The statues so much extolled before the times we now speak of, were more estimable for their

antiquity than merit. Phidias was the first who gave the Greeks a taste for the Fine in nature, and taught them to copy it. Hence, as soon as his works appeared, they were universally admired;¹ and what is still more astonishing than that he made admirable statues, is, his making so many of them: for their number, according to authors, seems incredible; and he perhaps is the only one that ever united so much facility with such perfection.

I believe he worked with great pleasure upon a block of marble, found in the Persian camp after the battle of Marathon, in which those Barbarians were entirely defeated.² They had assured themselves of victory, and had brought that stone thither, in order to erect it as a trophy. Phidias made a Nemesis of it, the goddess whose function it is to humble and punish the insolent pride of men. The natural hatred of the Greeks for the Barbarians, and the grateful pleasure of avenging their country, undoubtedly animated the sculptor's genius with new fire, and lent new force and address to his hands and chisel. At the price of the spoils taken from the same enemies, he made a statue of Minerva also for the Plataeans.³ It was of wood gilt. The face, as well as the hands and feet, were of Pentelic marble.

His talent lay principally in representing the gods. His imagination was great and noble; so that, according to Cicero, he did not copy their features and resemblance from any visible objects, but by the force of genius, formed an idea of true beauty, to which he continually applied himself, and which became his rule and model, and directed his art and execution.⁴ Hence Pericles, who had a higher opinion of him than of all the other architects, made him director, and a kind of superintendent of the buildings of the republic.

When the Parthenon, that magnificent temple of Minerva, was finished, of which some remains not ill preserved, still charm travellers, and it was to be dedicated, which consisted in setting up the statue of the goddess in it, Phidias was charged with the work, in which he excelled himself. He made a statue of gold and ivory, of twenty-six cubits (or thirty-nine feet) high. The Athenians chose to have it of ivory, which at that time, was much more scarce and valuable than the finest marble. How rich soever this prodigious statue was, the sculptor's art infinitely

the pontificate of Sixtus IV. on the Cælian hill, near the present church of St. John Lateran and the Scala Santa; the *Torso of Hercules*, found near Pompey's theatre, about the close of the fifteenth century; the *Hercules Farnese*, with the group of Dirce, Zethus, and Amphion, excavated among the ruins of the baths of Caracalla, about the middle of the sixteenth century; the *Hercules and Telephus*, dug up near the same spot as the *Torso*, and about the same time; the *Antinous* or *Mercury*, found on the Esquiline hill, in the reign of Paul III.; the *Dying Gladiator*, or "Marmillo expirans," now considered as a wounded soldier, discovered in the gardens of Sallust on the Quirinal hill; the *Melæger*, discovered, according to Aldrovandi, near to the Porta Portese, in the reign of Paul III.; the *Diocoboli*, or *Athletæ*, in different attitudes, with quails, found in the ruins of the Villa Hadriana at Tivoli, and at a place called the Columbaro, on the Appian Way; the groups of *Niobe* and *Laocon*, already noticed, the latter discovered among the ruins of the baths of Titus, in 1506; the *Apollo di Belvedere*, taken from under the ruins of the palace of Nero at Antium (Nettuna) during the reign of Paul V. (1605—1621); the *Venus of the Capitol*, found near St. Vitale, between the Viminal and Quirinal hills, in the last century; and (last not least)—

"The statue that enchants the world"—

the *Venus de Medici*, so denominated from its having been placed in the garden of the Villa Medici at Rome, found, according to a generally received tradition, in the portico of Octavia, near the theatre of Marcellus, but at what particular period has not been clearly ascertained.—*Ed.*

* Thomson.

1 Quinti Hortensii admodum adolescentis ingenium, ut Phidie signum, simul aspectum et probatum est. *Cic. de clar. Orat.* n. 223.

2 Pausan. in Attic. p. 62.

3 Id. in Bæot. p. 548.

4 Phidias, cum facere Jovis formam aut Minervæ, non contemplabatur aliquem a quo similitudinem duceret: sed ipsius in mente insidebat species pulchritudinis eximia quædam, quam intuens, in eaque defixus, ad illius similitudinem artem et animum dirigebat. *Cic. in Orat.* n. 9.

surpassed the materials of it.¹ Phidias had carved upon the convex part of Minerva's shield, the battle of the Athenians with the Amazons; and upon the concave, that of the giants with the gods; upon the buskins of the goddess, he added the battle of the Centaurs and Lapithæ; on the pedestal the birth of Pandora, with all that fable says of it. Cicero, Pliny, Plutarch, Pausanias, and several other great writers of antiquity, all connoisseurs, and eye-witnesses of it, have spoke of this statue. Their testimony leaves no room to doubt its having been one of the finest pieces of workmanship that ever was in the world.

Some assure us, says Plutarch, that Phidias put his name upon the pedestal of his Minerva at Athens.² Pausanias does not mention this circumstance, which Cicero entirely denies, who says expressly, that Phidias not being permitted to put his name to the statue, had cut his portrait upon the goddess' shield.³ Plutarch adds, that Phidias had represented himself in the form of an old man, quite bald, raising a large stone with both his hands; and had also represented Pericles fighting with an Amazon, but in such an attitude, that his hand which was extended to throw a javelin hid part of his face.

The most excellent artists have always affected to insert their names in their works, in order to partake of the immortality they gave others. Myron that famous statuary, to immortalize his name, put it in characters almost imperceptible, upon one of the thighs of the statue of Apollo.⁴ Pliny relates, that two Lacedæmonian architects, Saurus and Batrachus, without accepting any reward, built some temples in a part of the city of Rome, which Octavia caused afterwards to be enclosed with galleries. They flattered themselves, that they should have liberty to set their names upon them, which indeed seems the least recompense due to their generous disinterestedness. But we find that in those days, the persons who employed the most able artists, took all possible precautions to avoid sharing the esteem and attention of posterity with simple workmen. These were absolutely refused their demand. Their address, however, supplied them with an amends. They threw in by way of ornaments, lizards and frogs upon the bases and capitals of all the columns. The name of Saurus was implied by the lizard, which the Greeks call *σαῦρος*, and that of Batrachus by the frog, which they call *βάτραχος*.

The prohibition I speak of was not general in Greece, of which we shall soon see a very

extraordinary instance in relation to Phidias himself: it was perhaps peculiar to Athens. However it were, his having given the two portraits a place in the shield of Minerva was made criminal.⁵ Nor was that all; Menon, one of his pupils, demanded to be heard, and made himself his accuser. He alleged that he had applied to his own use part of the forty-four talents of gold, which were to have been used in the statue of Minerva.⁶ Pericles had foreseen what would happen, and by his advice, Phidias had used the gold in his Minerva in such a manner, that it could easily be taken out and weighed. It was weighed accordingly, and to the accuser's shame, found to amount to the forty-four talents. Phidias, who plainly saw that his innocence would not secure him against the malignant jealousy of those who envied him, and the intrigues of Pericles' enemies, who had hatched this affair against him, withdrew privately to Elis.

He there conceived thoughts of avenging himself upon the injustice and ingratitude of the Athenians, in a manner pardonable and allowable in an artist, if ever revenge could be so, which was by employing his whole industry in making a statue for the Eleans, that might eclipse his Minerva, which the Athenians looked upon as his master-piece. This he effected. His Jupiter Olympius was a prodigy of art; and so perfectly such, that to set a just value upon it, it was thought that it deserved to be ranked amongst the seven wonders of the world. Nor had he forgot any thing that might conduce to its perfection. Before he had entirely finished it, he exposed it to the view and judgment of the public, hiding himself in a corner, whence he overheard all that was said of it.⁷ One thought the nose too thick, another the face too long; and different persons found different faults. He made the best use he could of all the criticisms that seemed to have any just foundation; convinced, says Lucian, who relates this fact, that many eyes see better than one. An excellent reflection in every kind of work!

This statue of gold and ivory, sixty feet high, and of a proportionate magnitude, made all succeeding statuary despair. None of them had the presumption even to imagine that they could imitate it: *Præter Jovem Olympium, quem nemo æmulatur*, says Pliny.⁸ According to Quintilian,⁹ the majesty of the work equalled that of

5 Plut. in Pericl. p. 169.

6 In supposing the proportion of gold to silver as ten to one, forty-four talents of gold amounted to four hundred and forty talents, that is to say, to one million three hundred and twenty thousand livres; something less than sixty thousand pounds sterling.

7 Lucian in Imaginib. p. 31. 8 Plin. l. xxxiv. c. 8.

9 Quintil. l. xii. c. 10.

1 Plin. l. xxxvi. c. 5.

2 Plut. in Pericl. p. 160.

3 Phidias similem sui speciem inclusit in clypeo Minervæ, cum inscribere non liceret. *Tuscul. l. i. n. 34.*

4 Signum Apollinis pulcherrimum, cujus in femore litterula minutis argenteis nomen inscriptum Myronis. *Cic. Ferrin. de sign. u. 93.*

the god, and even added to the religion of all who saw it: *Ejus pulcritudo adiecisse aliquid etiam recepta religioni videtur, adeo majestas operis deum aequavit.* Those who beheld it, were struck with astonishment, and asked whether the god had descended from heaven to show himself to Phidias, or Phidias had been carried thither to contemplate the god. Phidias himself, upon being asked whence he had taken his idea of his Jupiter Olympius, repeated the three fine verses of Homer, in which the poet represents the majesty of that god in the most sublime terms; thereby signifying, that the genius of Homer had inspired him with it.¹⁰

At the base of the statue was this inscription: PHIDIAS THE ATHENIAN, THE SON OF CHAR- MIDES, MADE ME.¹¹ Jupiter seems here to glory in a manner that he is the work of Phidias, and to declare so by this inscription; tacitly to reproach the Athenians with their vicious delicacy, in not suffering that excellent artist to annex his name or portrait to the statue of Minerva. Pausanias, who had seen and carefully examined this statue of Jupiter Olympius, has left us a very long and very fine description of it. The Abbe Gedoy has inserted it in his dissertation upon Phidias, which he has read in the Academy of Inscriptions, and was pleased to communicate to me. I have made use of it in what I have related of this famous statuary.

The statue of Jupiter Olympius raised the glory of Phidias to its highest degree, and established him a reputation which two thousand years have not obliterated. He finished his labours with this great master-piece. The shop where he worked, was preserved long after his death, and travellers used to visit it out of curiosity. The Eleans, in honour of his memory, instituted an office in favour of his descendants, the whole duty of which consisted in keeping this magnificent statue clean, and in preserving it from whatever might sully its beauty.¹²

POLYCLETUS.

Polyclerus was of Sicyone, a city of Peloponnesus, and lived in the 87th Olympiad,¹³ A. M. 3771. Ageladas was his master, and several very famous sculptors his disciples, of which number was Myron, of whom we shall soon speak. He made several statues of brass, which were highly esteemed. One of them represented a beautiful young man with a crown on his head, which was sold for an hundred talents, that is, an hundred thousand crowns. But what gave him most reputation was the statue of a Dorypho-

rus,¹⁴ in which all the proportions of the human body were so happily united, that it was called *the Rule*;¹⁵ and the sculptors came from all parts, to form in themselves, by studying this statue, a just idea of what they had to do, in order to excel in their art. Polycletus is universally admitted to have carried the art of sculpture to its highest perfection, as Phidias is for having been the first to place it in honour.¹⁶

Whilst he was at work upon a statue, by order of the people, he had the complaisance to hearken to all the advice they thought fit to give him, to retouch his work, and to change and correct in it whatever displeased the Athenians.¹⁷ But he made another in private, in which he followed only his own genius, and the rules of art. When they were exposed together to the view of the public, the people were unanimous in condemning the first, and admiring the other. *What you condemn,* says Polycletus to them, *is your work, what you admire, is mine.*

MYRON.

Little is known of this statuary. He was an Athenian, or at least passed for one, because the inhabitants of Eleutheria, the place of his nativity, had taken refuge at Athens, and were regarded as citizens of it. He lived in the 87th Olympiad, A. M. 3771. His works rendered him very famous, especially a heifer which he made in brass, and which gave occasion for abundance of fine Greek epigrams, inserted in the fourth book of the Anthologia, (*Florilega.*)

LYSIPPUS.

Lysippus was a Sicyonian, and lived in the time of Alexander the Great, in the 114th Olympiad,¹⁸ A. M. 3676. He followed at first the business of a locksmith; but his happy genius soon induced him to take up a profession more noble and more worthy of him. He used to say, that the Doryphorus of Polycletus had served him instead of a master.¹⁹ But the painter Eupompus directed him to a much better and more certain guide. For upon Lysippus' asking him, which of his predecessors in the art of sculpture it was best to propose to himself as a model and master; *No man in particular,* replied he, *but nature*

14 So the guards of the king of Persia were called.

15 *Fecit et quem canona artifices vocant, lineamenta artis ex eo potentes velut a lege quadam; solusque hominum artem ipse fecisse artis opere judicatur.* *Plin.*

16 *Hic consummasse hanc scientiam judicatur, et totum euticen sic erudisse, ut Phidias aperuisse.* *Plin.*

17 *Elia. l. xiv. c. 8.*

18 *Plin. l. xiv. c. 8.*

19 *Polyclerus Doryphorum sibi Lysippus sibi magistrum fuisse.* *Cic. in Brut. n. 206.*

10 *Val. Max. l. iil. c. 7.*

12 *Paus. l. v. p. 313.*

11 *Pausan. l. v. p. 303.*

13 *Plin. l. xxxiv. c. 8.*

herself.¹ He afterwards studied her solely, and made great improvements from her lessons.

He worked with so much ease, that of all the ancients none made so great a number of statues as himself; they are said to amount to six hundred.

He made amongst others the statue of a man rubbing himself after bathing, of exquisite beauty. Agrippa set it up in Rome before his baths. Tiberius, who was charmed with it, having attained the empire, could not resist his desire to possess it, though in the first years of his reign, in which he was sufficiently master of himself to moderate his passions: so that he removed the statue into his own chamber, and caused another very fine one to be put up in the same place.² The people, who feared Tiberius, could not, however, refrain from crying out in the full theatre, that they desired the statue might be replaced: with which the emperor, how fond soever he was of the statue, was obliged to comply, in order to appease the tumult.

Lysippus had made several statues of Alexander according to his several ages, having began at his infancy. It is well known, that prince had forbade all statuaries but Lysippus to make his statue, as he had done all painters but Apelles to draw his picture;³ rightly judging, says Cicero, that the skill of those two great masters in perpetuating their own names, would also immortalize his: for it was not to please them he published that edict, but with a view to his own glory.⁴

Amongst these statues, there was one of exquisite beauty, upon which Nero set a high value, and was particularly fond of. But as it was only of copper, that prince, who had no taste, and was struck with nothing but glare, thought fit to have it gilt.⁵ This new decoration, costly as it was, made it lose all its value, by covering the delicacy of the art. All

this gaudy supplement was obliged to be taken off, by which means the statue recovered part of its original beauty and value, notwithstanding the traces and scars the putting on and taking off the gold had left upon it. In the bad taste of Nero methinks I see that of some people, who industriously substitute the tinsel of conceits and witticism to the precious and inestimable simplicity of the ancients.

Lysippus is said to have added much to the perfection of statuary, in expressing the hair better than those who preceded him, and in making the heads less, and the bodies not so large; upon which he said of himself, *that others represented men in their statues as they were; but he, as they appeared*; that is to say, if I mistake not, in the manner that was most proper to make them appear with all their beauty.⁶ The chief point in sculpture as well as in painting is to follow and imitate nature: Lysippus we see made it his guide and rule. But art does not stop there. Without ever departing from nature it throws in strokes and graces, which do not change, but only embellish it, and catch the eye in a more lively and agreeable manner. Demetrius, otherwise an excellent statuary, was reproached with confining himself too scrupulously to truth, and for being more studious of likeness than beauty in his works.⁷ This Lysippus avoided.

PRAXITELES.

Praxiteles lived in the 104th Olympiad, A. M. 3640. We must not confound him with another Praxiteles, who made himself famous in the time of Pompey by excellent works in the goldsmith's art. Him we speak of is of the first rank amongst the statuaries. He worked chiefly in marble, and with extraordinary success.

Amongst the great number of statues made by him, it would have been hard to know which to prefer, unless himself had informed us:⁸ which he does in a manner that has something singular enough in it. Phryne, the celebrated courtesan, was much in his favour. She had often pressed him to make her a present of one of the best of his works, and that which he believed the most finished; and he could not refuse it. But when he was to judge which it was, he deferred doing so from day to day; either because he found it difficult to determine himself, or rather strove to evade her warm and

1 Eum interrogatum quem sequeretur præcedentium, dixisse, demonstrata hominum multitudine, naturam ipsam imitandam esse, non artificem. *Plin.*

2 Mire gratum Tiberio principi, qui non quivit temperare sibi in eo, quamquam Imperiosus sui inter initia principatus, transtulitque; in cubiculum, alio ibi signo substituta. *Plin.*

3 Edicto vetuit nequis sibi præter Apellem pingeret, aut alius Lysippo duceret æra fortis Alexandri vultum simulantia. *Hor. l. ii. Epist. ad Aug.*

4 Neque enim Alexander gratiæ causâ ab Apelle potissimum pingi, et a Lysippo fingi volebat, sed quod illorum artem cum ipsis, tum etiam sibi, gloriæ fore putabat. *Cic. ad fam. l. v. Epist. 12.*

5 Quam statuam inaurari jussit Nero princeps, delatus admodum illa. Dein, cum pretio perisset gratia artis, detractum est aurum; pretiosiorque; talis existimatur, etiam cicatricibus operis atque; concessuris, in quibus aurum hæserat, remanentibus. *Plin.*

6 Vulgo dicebat ab illis (veteribus) factos, quales essent homines; a se quales viderentur esse.

7 Demetrius tanquam nimis in ea (veritate) reprehenditur; et fuit similitudinis quam pulchritudinis amator. *Quincil. l. i. c. 10.*

8 Pausan. l. i. p. 34.

earnest solicitations, by protracting the affair. Persons of Phryne's profession seldom want industry and address. She found a means to get the secret out of Praxiteles, in spite of himself. One day when he was with her, she made his own servant, whom she had gained to her purpose, come running to tell him; "Your workhouse is on fire, and part of your works already spoiled: which of them shall I save?" The master quite out of his senses, cried out, "I am ruined and undone, if the flames have not spared my Satyr and my Cupid." "Be in no pain, Praxiteles," resumed Phryne immediately, "there is nothing burned: but now I know what I wanted." Praxiteles could hold out no longer. She chose the Cupid, which she afterwards set up at Thespia, a city of Bœotia, where she was born, and whither people went long after to see it out of curiosity. When Mummus took several statues from Thespia to send them to Rome, he paid some regard to this, because consecrated to a god. The Cupid of Verres, mentioned by Cicero, was also done by Praxiteles, though not the same with this.

It is undoubtedly of the first that mention is made in Mr. De Thou's memoirs. The fact is very curious, wherefore I shall transcribe it as related there. Mr. De Thou when young, went into Italy with Mr. De Foix, whom the court sent thither. They were then at Pavia. Amongst other rarities which Isabella of Este, the duke of Mantua's grandmother, had disposed with great care and order in a magnificent cabinet, Mr. De Thou was shown an admirable piece of sculpture; this was a Cupid sleeping, made of the fine marble of Spezzia, upon the coast of Genoa, by the celebrated Michael Angelo Buonarrotti, who revived the arts of painting, sculpture, and architecture, which had long been neglected before him. De Foix, upon the account given him of this master-piece, went to see it. All his train, and De Thou himself, who had a very exquisite taste for works of this kind, after having attentively considered it on all sides, declared unanimously, that it was infinitely above all praise that could be given it.

When they had admired it for some time, another Cupid was shown them, that had been wrapt up in a piece of silk. This monument of antiquity, such as the many epigrams written by Greece⁹ of old in its praise represent it, was still soiled with the earth out of which it had been taken. Upon comparing the one with the other, the whole company were ashamed of having judged so much to the advantage of the first, and agreed that the ancient Cupid seemed instinct with life, and the modern a mere block of marble

without expression. Some persons of the house then assured them, that Michael Angelo, who was more sincere than great artists generally are, had earnestly requested the countess Isabella, after having made her a present of his Cupid, and seen the other, that the ancient one should be shown last; that the connoisseurs might judge on seeing them both, how much the ancients excelled the moderns in works of this kind.

But the most judicious are sometimes mistaken, as the same Michael Angelo himself has given us a proof.¹⁰ Having made the figure of a Cupid, he carried it to Rome; and having broke off one of its arms which he kept, he buried the rest in a place which he knew was to be dug. This figure being found, it was admired by the connoisseurs, and sold for an antique to the cardinal San Gregorio. Michael Angelo soon undeceived them, by producing the arm he had kept. There is something very extraordinary in having ability enough to imitate the ancients so perfectly, as to deceive the eyes of the best judges; and at the same time so much modesty, as to confess ingenuously a great superiority on their side, as we see Michael Angelo did.

Something like this is related on a different occasion. Joseph Scaliger, the most learned critic of his times, boasted that it was impossible for him to be deceived in regard to the style of the ancients. Six verses were sent abroad as lately discovered; they are,

Here, si querelis, ejulatu, fletibus
Medicini fieret miseris mortaliū,
Auro parande lacrumæ contra forent.
Nunc hæc ad minuenda mala non magis valent,
Quam Nenia Præfice ad excitandos mortuos.
Res turbide consilium non fletum expetunt.

These verses, which are admirable, and have all the air of antiquity, deceived Scaliger so effectually, that he cited them in his commentary upon Varro, as a fragment from Trabea, not long since discovered in an ancient manuscript. Trabea was a comic poet, and lived six hundred years after the foundation of Rome. They were, however, made by Muretus, who played Scaliger, his rival and competitor, this trick.

We may believe that Praxiteles, abandoned as he was to Phryne, did not fail to employ the work of his hands for her, who had made herself the mistress of his heart.¹¹ One of Phryne's statues was placed afterwards in Delphos itself, between those of Archidamus king of Sparta, and Philip king of Macedon. How infamous this! If riches were a title to a place in that temple, she might well pretend to it: for hers were immense. She had the impudence (for by

⁹ There are two and twenty epigrams upon this Cupid in the fourth book of the Anthologia.

¹⁰ Mr. de Piles' life of M. Angelo.

¹¹ Athen. l. xiii. p. 591.

what other name can I call the fact I am going to relate?) to engage to rebuild the city of Thebes at her own expense, provided this inscription were placed on it: ALEXANDER DESTROYED, AND PHRYNE REBUILT THEBES.

The inhabitants of the Isle of Cos, had demanded a statue of Venus from Praxiteles.¹ He made two, of which he gave them their choice at the same price. The one was naked, the other covered; but the first was infinitely the most beautiful: *immensa differentia fama*. The people of Cos had the wisdom to give the preference to the latter; convinced that decency, politeness, and modesty, did not admit them to introduce an image into their city, that might be of infinite prejudice to their manners: *Securum id ac pudicum arbitantes*. How many Christians does this chaste conduct disgrace? The Cnidians were less attentive in point of morals. They bought the rejected Venus with joy, which afterwards became the glory of their city; whither people went from remote parts to see that statue, which was deemed the most finished work of Praxiteles. Nicomedes, king of Bithynia, set so high a value upon it, that he offered to release all the debts the Cnidians owed him, which were very considerable, provided they would give it him. They thought it would dishonour, and even impoverish them to sell for any price whatsoever, a statue, which they considered as their glory and riches.

SCOPAS.

Scopas was both an excellent architect and an excellent sculptor.² He was of the Island of Paros, and flourished in the 87th Olympiad, A. M. 3572. Amongst all his works, his Venus held the first rank. It was even pretended, that it was superior to the so much renowned one of Praxiteles. It was carried to Rome: but, says Pliny, the number and excellency of the works which abound in this city obscured its lustre; besides which, the employments and affairs that engross people here, scarce afford them time to amuse themselves with these curiosities; to consider and admire the beauties of which, require persons of leisure, and such as have no business, as well as places quiet and remote from noise.³

I have observed elsewhere, that the pillar which he made for the temple of Diana at Ephesus, was reputed the finest in that building. He also very much contributed to the

beauty and ornament of the famous Mausoleum, erected by queen Artemisa, to the memory of her husband Mausolus, in the city of Halicarnassus, which was reckoned one of the seven wonders of the world, as well for its magnitude and loftiness of architecture, as the quantity and excellence of the works of sculpture, with which it was enriched.⁴ Several illustrious competitors divided the glory of this structure with Scopas. I purposely referred to this place the description Pliny has left us of part of this superb pile, because it relates more to sculpture than architecture.

The extent of this Mausoleum was sixty-three feet from north to south. The fronts not quite so broad, and the circumference four hundred and eleven feet.⁵ It was thirty-six feet and a half high, and had thirty-six pillars around it. Scopas undertook the east side, Timotheus had the south, Leochares the west, and Briaxis the north. These were the most famous sculptors of those times. Artemisa died before they had finished the work: but they believed it not for their honour to leave it imperfect. It is doubted to this day, says Pliny, which of the four succeeded best: *Hodieque certant manus*. Pythis joined them, and added a pyramid to the top of the Mausoleum, upon which he placed a chariot of marble drawn by four horses. Anaxagoras of Clazomena said coldly when he saw it, Here's a great deal of money turned into stone.⁶

I ought not to conclude this article, without mentioning a very singular dispute, in which two of the most celebrated statuarys I have spoke of were engaged: these were Phidias and Polycletus.⁷ I have observed above, that the temple of Diana at Ephesus was not finished till after a long series of years. The question was, at a time Pliny does not fix, to place in it some statues of Amazons, very probably to the number of four. Several had been done by the greatest masters both dead and living. The majesty of the temple required, that none should be admitted which were not exquisitely finished. It was necessary, upon this occasion, to consult the most accomplished sculptors in being, how interested soever they might be in the dispute. Each gave himself the first place, and afterwards named those they believed to have succeeded best; and it was the sculptors who had the majority of these latter suffrages, that were declared victorious. Polycletus had the first place, Phidias the

¹ Plin. l. xxxvi. c. 5.

² Ibid.

³ Romæ quidem magnitudo operum eam (Venerem) obliuiscit, ac magni officiorum negotiorumque; accrivionnes a contemplatione talium operum abducunt, quoniam otiosorum et in magno loci silentii apta admiratio talis est. Plin.

⁴ Plin. l. xxxvi. c. 5. Vitruv. præfat. l. vii.

⁵ There was apparently a wall round the Mausoleum, and some void space between it and that wall; which seems necessary to make up the extent of the circumference mentioned here.

⁶ Dioz. Laert. in Anaxag.

⁷ Plin. l. xxxiv. c. 8.

second, and Ctesilas and Cylon the two others.⁹ Something of the same nature had happened long before, but on a different occasion. After the battle of Salamin, the Grecian captains, according to a custom observed in those times, were to set down on a paper him they believed to have distinguished himself most in the action. Each named himself first, and Themistocles second; which was in reality giving him the first place.

It is plain, that in the short enumeration I have made of the ancient statuary, I have chosen only the very flower of the most famous.⁹ There are many others, and of great reputation, which I am obliged to omit, to avoid enlarging my work too much. Cicero highly extols the statue of Sappho in copper, done by the celebrated statuary Silanion.¹⁰ Nothing was more perfect than this statue: Verres had taken it from the Prytanæum of Syracuse. Pliny relates,¹¹ that the same Silanion had cast the statue of Apollodorus, his brother sculptor, in brass, who was a passionate man, and violent against himself; and who often, in the heat of his disgust, broke his own works to pieces, because he could not carry them to that supreme degree of perfection, of which he had the idea in his thoughts. Silanion represented this furious humour in so lively a manner, that it did not seem so much to express Apollodorus, as rage itself personified. *Hoc in eo expressit, nec hominem ex arte fecit, sed iracundiam.*

The same Pliny also very much extols a Laocoon,¹² which was in the palace of Titus, and gives it the preference to all other works of painting and sculpture. Three excellent artists, Agesander, Polydorus, and Athenodorus, Rhodians, had joined in executing it, and had made out of one stone Laocoon, his children, and the serpents in all their different folds. The work must have been admirable, if equal to the beautiful description of this fact in Virgil,¹³ or indeed if it came near it.

It remains for me to draw the character of those illustrious artists, who excelled so much in representing the gods and men naturally. I shall do it after Quintilian and Cicero, two admirable painters of characters and portraits, but who generally cannot be copied without being spoiled.

The first having enumerated the different manners in painting: he continues thus. "There is the same difference also in sculpture. For the first statuary of whom we have any account,

Calon and Egesias, worked in a rude manner, and almost in the Tuscan taste. Calamis came next, and his works had less constraint in them. Those of Myron afterwards had still a more natural and easy air. Polyclethus added regularity and gratefulness to them. The first place is generally given to him: however, as there is nothing entirely perfect, his statues are said to want a little more force. And indeed he represented men with infinite graces, and better than they are: but he did not entirely come up to the majesty of the gods. It is even said, that the manly age confounded his skilful hands, for which reason he scarce ever expressed any thing but tender youth. But what Polyclethus wanted, fell to the share of Phidias and Alcámenes. However, Phidias was judged to have represented the gods better than men. Never did artist use ivory with so much success; if we only consider his Minerva of Athens, and his Jupiter Olympius, the beauty of which seemed to improve the religion of the beholders, so much did the work express the majesty of the god. Lysippus and Praxiteles were reckoned to have copied nature best. For, as to Demetrius, he is blamed for having carried that care to excess, and for having confined himself more to resemblance than beauty."¹⁴

The passage of Cicero is shorter, in which he also mentions several of the ancients very little known. "I observe," says he, "that Canachus, in his statues, has something dry and rude. Calamis, rude as he is, has not so much of that character as Canachus. Myron does not come near enough to the just; though, strictly speaking, whatever comes from his hands is fine. Polyclethus is much above them all, and in my opinion has attained perfection."¹⁵

I have already observed more than once, that sculpture is indebted to Greece for the supreme perfection to which it attained. The grandeur of Rome, which was to erect itself upon the ruins of that of Alexander's successors, long retained the rustic simplicity of its dictators and consuls, who neither esteemed, nor practised, any arts but those which were subservient to war, and the occasions of life.¹⁶ They did not

¹⁴ Quintil. l. 12. c. 10.

¹⁵ Cic. in Brut. n. 70.

¹⁶ The practice of erecting statues at Rome to the memory of its eminent men, may be traced to a very early period. The founders and legislators of the republic, the victorious generals, and whoever had by any signal means deserved well of their country, were honoured by iconic representations. During the whole of the Consular government of Rome, statues were voted by the senate, or erected to magistrates by the gratitude of the people: any injury done to them was considered as personal, and afterwards punished by the provisions of the Julian law. But this prevalence and encouragement of sculpture must be considered merely as a part of the system of rewards held out by the government to men of merit, and totally

⁸ Plut. in Themist. p. 120.

⁹ Florem hominum libantibus.

¹⁰ Cic. in Verr. de sign. n. 125, 127.

¹¹ Plin. l. 34. c. 8. ¹² Plin. l. 36. c. 5.

¹³ Æneid. l. 2.

begin to have a taste for statues and the other works of sculpture, till after Marcellus, Scipio, Flaminius, Paulus Emilius, and Mummius, had exposed to the view of the Romans whatever

Syracuse, Asia, Macedonia, Corinth, Achaia, and Boeotia, possessed in works of art. Rome saw with admiration the paintings and sculpture in brass and marble, with all that serves

distinct from that love and knowledge of the art, now called *taste*. Before they had become versant with the statuary of the Greeks, or had acquired so many fine specimens from motives of rapacity and triumph, the Romans were entire strangers to a sense of excellence in the art. As they became more luxurious, the desire of accumulating Greek statuary increased, and no general

neglected to enrich his triumph with these spoils of the vanquished cities. The curious inquirer into the history of sculpture may be gratified by the following details of the several deportations of famous statues to Rome, for which we are indebted to the industry of a German antiquary :—

	From	By
285 statues in bronze, and 230 in marble,	Asia Minor.	Fulv. Nobilior.
134 do.	Iditto.	Lucius Scipio.
250 carri or waggon filled with statues,	Macedonia.	Emilius Paulus.
Minerva Cliduchos, placed in the temple of Dea Fortuna,	Iditto.	Iditto.
25 statues of Macedonian heroes by Lysippus, placed before the } portico of Metellus,	Iditto.	Metellus Maced.
Statues and busts of Alexander and Hephestion,	Iditto.	Iditto.
Minerva, bronze, by Praxiteles,	Iditto.	Iditto.
Apollo,	Carthage.	L. Scipio Africanus.
12 labours of Hercules by Lysippus,	Iditto.	()
Minerva, in ivory, &c. in the Circus Maximus,	()	Sylla.
Hercules, bronze, by Myron,	Syracuse.	Messina.
2 Canephora, by Polyclethus,	Iditto.	Verres.
Diana, by Cephessodotus,	Segesta.	Iditto.
Apollo, by Myron, in the temple of Æsculapius,	Agrirentum.	Iditto.
Cupid, by Praxiteles,	Mamertinum.	Iditto.
Sappho, bronze, by Selanion,	Syracuse.	Iditto.
Jupiter,	()	()
Colossal Apollo, by Calamis, in the Capitol,	()	L. Lucullus.
Hercules,	()	Iditto.
Mithridates, in gold, six feet high,	Pontus.	Pompey.
Pharnax, in silver,	Iditto.	Iditto.
Janus Pater,	Alexandria.	Aug. Cesar.
Apollo, by Scopas, in the Palatine temple,	Iditto.	Iditto.
Latona, by Cephessodotus, in do.	Iditto.	Iditto.
Victory, in do.	Tarentum.	Iditto.
Four statues which supported the tent of Alexander in the } Palatine temple of Mars,	Macedonia.	Iditto.
Dioscuri, in the temple of Jupiter Tonans,	Delphi.	Iditto.
Colossal Jupiter, by Myron, in do.	Samos.	Iditto.

Although by far the greater part of these were given to the Roman people, and exhibited in temples, porticoes, and places of public resort, yet several of the proconsuls and generals, upon their return to Rome, established galleries and private collections, to which the lovers of the art might occasionally resort.† Asinius Pollio, Verres, and Vindex, were distinguished collectors, and purchased marbles at high prices. In private mansions and villas, those of superior excellence were deposited. Cicero appears, from two of his epistles to Atticus, to have been particularly desirous of furnishing his library with choice specimens. This fashion, once established, grew into excess: a taste for the arts showed itself in the choice of good subjects, and the most celebrated Grecian bronzes were studiously copied in marble by artists transplanted from Greece. Pompey is said to have been the first encourager of these migrations, for that purpose. Julius Cesar was his rival in these acquisitions; and in the temple which he dedicated to Venus Genetrix, were deposited not only exquisite Greek statues, but cabinets of cameos and intaglios. M. Antony embellished the Præ-

torian palace with statues which he had borrowed from Cesar. But in the temple of Apollo, and the library built by Augustus upon the Palatine hill, the magnificence of the collections already named was eclipsed, both in point of number and value. Several of the statues were composed of solid silver. The luxury of casting them in the precious metals followed the fortune which favoured and corrupted the Romans. It was imported into Rome with the spoils of Carthage, and of Mithridates, king of Pontus, and it was soon imitated by the chiefs of either party, and the emperors, and multiplied by the abject flattery of their degenerate subjects.†

Among the monuments of sculpture made at Rome in the last days of her republic, and certainly by Grecian artists, are the statues of the Thracian kings, as prisoners at a triumph, done in gray marble. These were kings of the Scordisæ, a rude people, who were defeated by M. Licinius Lucullus, the brother of the magnificent senator. Exasperated by their repeated perfidy, he commanded

* Liv. Hist. l. xxxiv. c. 4. Plin. l. xxxiv. c. 8. Cic. In Verrem, v. c. 5, 15, 33.

† Guasco de l'Usage des Statues, chap. xx.

• Histoire de l'Enlèvement et du Transport d'œuvres remarquables de l'Art du pays des vaincus dans ceux de vainqueurs: traduit de l'Allemand de F. C. Sickler, 1803.

† Sueton. in Vit. Augusti, et in Vit. Caligula; Ed. mundi Figrelli de Statu illustrium Romanorum, 1650, 8vo. p. 144.

for the ornament of temples and public places. The people piqued themselves upon studying their beauties, discerning their excellencies, and knowing their value; and this kind of science

became a new merit, but at the same time the occasion of an abuse fatal to the republic. We have seen, that Mummius, after the taking of Carthage, in directing the persons who had

their hands to be cut off, a circumstance of cruelty represented in the marble, which now remains in the museum of the Capitol. The statue of Pompey, now in the hall of the Spada palace, but originally standing in the curia or basilica of Pompey, in which Caesar assembled the senate, and at the base of which he fell, affords a singular proof of a deviation from the known custom of the Romans, who generally represented their living heroes in armour; † for the great triumvir is sculptured as a deified hero, naked, and of colossal proportions.

Agrippa retained Diogenes of Athens to finish the statues which he placed in the Pantheon; Batrachus was employed in the porticoes of Octavia; and Pliny ‡ attests the skill and fame of Pythodorus, Philiscus, Hermolaus, Lysias, Criton, Nicolaus, Stephanus, and Menelas, Arthimon, Aphrodisius, Trallinus, and Sauros, all Greek artists, to whose labours the imperial residences owed much of their splendour. By these sculptors, about the close of the republic, the Roman freedmen and slaves were instructed in the elements of the art.

Augustus merited the eulogium of Livy, who honours him as the restorer of the temples of the gods. He assembled from every part of Greece the statues of the deities of the most genuine workmanship, with which he embellished Rome, whilst he encouraged a prevailing mode of figuring eminent persons of either sex in statuary, as portraits, which were placed in the public edifices, § or religiously preserved in their own. It is worthy of remark, that of this emperor two statues only are allowed to be real portraits, one in the Museum of the Capitol, holding the prow of a ship, in reference to the victory at Actium, and the other was formerly in the Rondonini collection at Rome. Pasiteles and Archelaus were the ornaments of the Augustan age of sculpture. The former cast in silver, Roscius, the celebrated actor, as an infant lying in a cradle, and entwined by a serpent, a situation of danger from which he had been rescued by his nurse. || Archelaus excelled in modelling in pipe-clay, from the most esteemed antiques; and is said by Pliny never to have begun a statue without having previously modelled it, having attained to the greatest perfection in the plastic art. ¶ Varro mentions Archelaus as having carved, out of a single block, a lioness with Cupids, who were forcing her to drink. Aulianus Evander, in the time of Augustus, restored the head of a statue of Diana, by Scopas, with singular success. ** His chief merit consisted in sculpturing bass-reliefs, modelling them in terracotta, and probably in making Bacchic vases in marble upon a smaller scale than that introduced under Hadrian. Horace alludes to the superior style of Evander in the *Tarentine*, or bass-relief in metals, for pateræ, cups, and vases. ††

The conduct of Augustus towards the Greeks was moderate and discreet, and such was that of his immediate successors, till the reign of Caligula. By the latter prince, Memmius Regulus was despatched with a command to collect from every city the statues which had been considered as its peculiar boast. With so much exactness were these orders obeyed, that the finest pieces of art

were brought to Rome, in a profusion by which his palaces were crowded, and many were distributed in his numerous villas. He ordered his own statue to be erected in every city of Greece and Asia Minor, and endeavoured to force the Jews to receive it into their temple at Jerusalem. ‡

In the reign of Nero, the Roman school of sculpture appears to have attained to a degree of perfection, which soon afterwards verged towards decline, till its revival under Hadrian. The statues of Seneca dying in a bath, of Sleep, in black marble, the Centaur and Cupid in the Villa Borghese, the Farnese Agrippina, and especially the beautiful heads of Domitian and Nerva, which upon undoubted evidence may be referred to the era now treated of, are creditable proofs of the proficiency made by Roman artists, who seemed to have learned from their Greek masters all that they were capable of teaching. Of the two busts of Nero in the Florentine gallery, that of him when a child expresses the greatest infantine beauty. The enormous luxury in which Nero indulged himself extended to architecture and its most costly embellishments; but in his own taste in the arts he was no less depraved than in his morals. He ordered some of the most finished bronzes of Greece to be covered with gilding, and even some of marble are known to have been so disfigured by his profuseness. This ludicrous attempt to increase magnificence prevailed at Rome for at least a century after his death.

The temple of Peace erected at Rome by Vespasian, after the joint triumph of himself and his son Titus, A. D. 72, was the most magnificent edifice then known, and was enriched with statues long esteemed among the finest in Greece, which were preserved in the library with paintings of equal celebrity. † The palace and baths of Titus were likewise repositories of similar works of art, either selected from the Grecian monuments already collected at Rome, or consisting of the best specimens which the Roman school could at that time supply. The Laocoon was discovered there. ‡

The reign of Trajan was distinguished by the particular kind of sculpture applied to bass-reliefs and trophies. Of such magnitude were the architectural plans adopted by Trajan, that men of talent in every description of art were invited to signalize themselves, under his munificent patronage, in every region of the empire. His bridge over the Danube, his triumphal arch at Ancona, his Forum, the site of which is now marked out by the historical column, raise his fame, as an encourager of the arts, far beyond that of his predecessors. By no historian or inscription have the names been transmitted to us of the sculptors who executed the Trajan column, but from its style, it appears to have been the work of Grecian masters.

Under the auspices of Hadrian, the successor of Trajan, the arts maintained a progressive degree of excellence. He was himself an artist as well as an admirer of the arts. § Every province in Greece enjoyed his munificence, and the temples of Jupiter at Athens which he restored, ||

* Phil. Judæus; Josephus Antiq. l. xvii. c. 6. l. xviii. 3. and De Bello Judaico, l. i. 33. and l. ii. 9.

† Plin. l. xxxvi. c. 15.

‡ Sueton. vit. Imp. Tit. c. 7.; Lamiden's Rome, p. 193.

§ Spartian Vit. Had. Hist. Aug. p. 68.

|| Pausan. l. v.

* Diod. Sic. l. i.

† Plin. l. xxxiv. c. 10.

‡ Jhb. xxxvi. c. 5.

§ Sueton. Calig. c. xxxiv.

¶ Cicero de Divin. l. i. c. 26.

¶ Plin. l. xxxv. c. 43.

** Plin. l. xxxvi.

†† Hor. Sermon. l. i. s. 3. v. 91.

undertaken the carriage of a great number of statues and paintings of the greatest masters to Rome, threatened them, if they lost or spoiled any of them upon the way, that

they should make them good at their own costs and charges. Is not this gross ignorance, says an historian, infinitely preferable to the pretended knowledge which soon succeeded it?

and that of Cyzicum, on the shores of Pontis, which he built, were stupendous monuments of imperial splendour. His villa at Tivoli was furnished with originals, or the finest copies of the most admirable statues. * His correct judgment in all works of art contributed more to the absolute superiority of this collection than the mere power he possessed of expending immense sums upon it. † Of his favourite Antinous, in different characters, there are infinite repetitions. There is no contemporary history or treatise from which the artists who embellished his sumptuous palaces can be authenticated. Apollodorus and Detrianus are recorded by Spartian ‡ as his favourite architects.

Of the two Antonines, M. Aurelius appears to have been the greater friend of the arts, which he patronised, in imitation of Hadrian. His equestrian statue in bronze in the area of the capitol has been judged by several to be the best now existing in the world. This age was most remarkable for the character and high finishing of heads intended as portraits, particularly of the imperial busts, as of M. Aurelius, Commodus when young, and of Lucius Verus.

From the reign of Augustus to the Antonines inclusively, a period of about 220 years, the predominant Roman style was rather minute than grand, and frequently tame or delicate with reference to outline and finishing. Although the Romans could no longer imitate the excellence of better ages, they valued and preserved the productions of Greek artists with increased veneration. But the total debasement of sculpture, from which none of its pristine elegance could be traced, is most apparent in the bass-reliefs of a triumphal arch erected at Rome in the reign of Septimius Severus. In comparison with the state of the arts under the Antonines, a lamentable inferiority may be observed—not that the arts declined so suddenly, from a scarcity of those who professed them, for many portraits in marble, both of this emperor and his favourite minister Plautianus, § afford a convincing proof that though the sculptors were many, yet the art was in decay. In that reign a new manner originated, which soon degenerated into absolute coarseness. It is distinguished by deep furrows in front, the hair and beard indicated by straight lines, the pupils of the eyes deeply drilled, and the countenances little characterised. The frequent revolutions, and princes who enjoyed sovereignty but for a day, filled the world with busts. The head of the man in power was easily substituted for that of his predecessors. Calligula caused the heads of the statues of Jupiter to be taken away, and supplied with his own resemblance. || By an edict of the emperor Maximin, all the bronze statues in the colonial cities were melted down, and coined into money. Alexander Severus admired colossal statues; and among those he caused to be erected was one of himself, composed of variegated marbles—a sufficient proof of the deterioration of the art. ¶

* Pianta della Villa Tiburtina di Adriano Cesare da Pirro Ligorio, Roma, 1751, fol.; Lumisden, Append. p. 411.

† Aurel. Victor. in vit. Hadriani.

‡ In Vit. Hadriani, Hist. Aug. p. 86.

§ Gibbon's Roman Hist. vol. I. p. 201, 8vo. Herod. I. iii.

|| Sueton. in Calig. cap. 22. and Dion. Chrysost. Rhet.

¶ Lamprid. in Alex. Sever. Aug. Hist.

The several authors who have treated of sculpture are undecided in fixing the exact period of the extinction of the arts at Rome. Some allow no proofs of their existence later than the Gordians, and by others they are extended to the reign of Licinius Gallienus, A. D. 208. It has been a received opinion, that the works of art were destroyed by the Goths and Lombards; but this does not rest on any veritable evidence. * So far, indeed, from having been industrious destroyers, at all times, proofs are not wanting wherein they sedulously preserved the more celebrated reliques of antiquity which remained at Rome. † The civil contentions which had taken place before the Goths became masters of Italy, and the triumph of the Christian over the Pagan religion, were efficient causes of the destruction of statues. Tacitus relates; that Sabinus, the brother of Vespasian, seized the statues of the capitol, and piled them on each other as a barrier in the gates, which were then in flames, to oppose the Vitelians who had revolted. Theodosius the Great, and his sons Arcadius and Honorius, destroyed every statue that could be called an idol. Those which had attracted crowds of worshippers for many ages were among the first to be broken to pieces by the zealous Iconoclasts, or thrown in a mutilated state into rivers and pools, particularly into the Tiber, and the lakes in the vicinity of Rome. St. Gregory, when Pope, at the end of the sixth century, instituted a search into private houses after concealed statues, and, where found, devoted them to instant destruction. § We know that architecture received more detriment from the violent contests between the Roman nobility of the middle ages than from the invasion of barbarians; and there is reason to believe, that the sculpture which remained to that day partook of the general demolition.

Having now briefly traced the history of sculpture at Rome, a few remarks may be made on its general characteristics, and the objects on which it was principally employed.

The Roman sculptors did not endeavour to imitate the naked figure, in which the Greeks excelled. The laws respecting the change of gowns, and the attention paid by the people to folding them with elegance, were literally followed by the artists of Rome. All their efforts were bent to acquire the utmost delicacy and perfection in finishing draperies and portraits. The public baths afforded them many opportunities of studying the effect of wet drapery, adhering to the limbs, especially in female subjects, and they were thus enabled to exhibit the grace and elegance of the naked and draped figure, combined under the same form. The personal vanity of the Romans, and their sacred attachment to the memory of their ancestors, proved a fertile source of employment to their numerous artists. Portraits and domestic statues were not limited

* Gibbon, vol. vii.; Guasco, p. 486; Em. David, p. 308; Gravii Thesaur. iv. p. 1870.

† Cassiodori Var. I. vii. formul. Theodorici. 13.; Histoire Litt. de la France, par les Benedictines, tom. ii. 39, 40, tom. iii. 21, and 431.

§ Hist. I. iii. c. 71.

§ Volater. Anthropol. I. xxii. Many cart-loads of fragments of marble statues were found in a muddy pool near Tivoli, laboriously demolished—a proof that the destruction was not by the sudden impulse of barbarian fury.

Strange weakness of human nature! Is innocence then inseparable from ignorance; and cannot knowledge, and a taste estimable in itself, be attained, without the manners suffering

thereby through an abuse, which sometimes, though unjustly, reflects reproach and disgrace upon the arts themselves?¹

This new taste for extraordinary pieces was

by any particular law; and it was an ostentatious luxury in which the richer citizens spared no expense. * The vestibules of their houses were crowded with the statues of their relatives or patrons, in marble, bronze, or coloured wax, which on particular festivals were appraised in the most sumptuous robes, and ornamented with jewels. † Historians assure us, that the Romans were not less careful than the Greeks in the scrupulous expression of the likeness of their portraits in their statues and busts. It is remarked by Tacitus, ‡ that Brutus and Cassius, though long since dead, were still present with us in their statues and biography. Possidius, in Plutarch, attests that the descendants of Brutus, who were his contemporaries, were to be recognised by their decided resemblance to the statue of their ancestor. § Sepulchral statues, or those which were deposited in the tombs or mausolea of eminent men and the patrician families, were held in the highest degree of veneration, || and were likewise of the most perfect workmanship. In the sepulchres of the last mentioned were placed not only the busts of those who had signalized themselves, but of those with whom they had been most intimately allied during life. That of the Scipios discovered in the Appian way, near the Porta Capena, contained, together with their own busts, that of the poet Ennius, with whom P. Scipio had lived in the strictest friendship. ¶ Virtues personified, or the tutelary divinities of the deceased, were frequently added.

Penates and *Lares* were in universal usage among the Romans, and were regarded as the tutelary deities, under whose immediate protection the person, the house, family, and possessions, of every individual were placed. These divinities were represented by small statues, seldom exceeding a very few inches in height; exquisitely proportioned and wrought, and cast in gold, silver, and bronze; but the intrinsic value of the first mentioned materials has occasioned their almost total disappearance. In these were generally comprehended the twelve greater divinities, ** besides *Genii*, but those most common were of Mercury and Hercules. It was customary with the Romans, when travelling, to carry the *Penates* with them, that they might not omit the usual sacrifice, should any festival happen during their journey. When they returned home, these images †† were deposited in the *Lararium* †† or wardrobe, which stood in some secret apartment, the sleeping room, or library. In process of time the Romans were not content with a single *Lararium*, †† but had another containing statues of heroes, poets, and eminent men, and even of their patrons. The superstition attached to these small statues was so great, that men of the first rank and celebrity did not neglect

I Non, puto dubites, Vinici, quin magis pro rep. fuerit, manere adhuc rudem Corinthiorum intellectum, quam in tantam ea intelligi; et quin hac prudentia illa imprudentia decori publico fuerit convenientior. *Fell. Patere.* l. i. c. 23.

the usage of them. We have instances in the lives of Antiochus, Xenophon, and Cicero. *

Genii were of the highest antiquity in the system of Pagan worship, and, in order to accommodate the idea of the divinity to the rude perception of the common people, offices and powers were assigned to them, which emanate only from the great First Cause. Antiquaries are uncertain in what manner the *Genius* of the Roman people was sculptured, and by what attribute he was distinguished from the statues of other deities. A temple was erected to him by Vespasian. The provincial deities were usually represented by female figures, many of which, with their proper attributes, may be seen in the series of the Roman coins from the republic to the close of the empire. The *Urbs Roma*, several statues of which were preserved in the great collections, was a figure of an athletic young female, habited nearly as *Minerva*, and holding a victory in her hand, but sitting. *Genii* of either sex have been usually represented with wings. *Cupid* and *Hymen* are winged, as also male figures which are now known to signify *Sleep* and *Death*.

As the art of making terra-cottas had been brought from Greece, together with casts from the finest bas-reliefs, the usage of them became very general at Rome, and they were most skillfully executed. In the mausolea or sepulchres which were near the great roads without the city, they were inserted as friezes, and profusely applied in domestic architecture in interior decoration. They were fastened by rivets of lead, the holes for which are visible in most of those which have been discovered. It is supposed that the more beautiful have been perfected by the graving tool, after they had been hardened in the kiln.

The invention of triumphal arches, profusely decorated with historical sculpture, belongs to the Romans: of the Augustan age; and though on the reverses of the coins of the first emperors, several delineations are given of some long since destroyed, it is from the arches of Titus, and his successors, now remaining, that we can form a just idea of their former grandeur. † Two of very elegant proportions were erected in honour of the emperor Trajan. The first is at Benevento, built on his return to Rome after the German and Dacian war; and the other at Aneona, perhaps after the second defeat of Decebalus. On the first mentioned are two orders of bas-reliefs in the frieze, representing a rich candelabrum, with two *genii*, having under their knees victims prepared for sacrifice. In the grand cornice is a sculptured frieze, representing the march of a triumph, by an almost innumerable train of figures. At Rome are still seen the arches of Titus, Septimius Severus, and Constantine. The

* Xenoph. l. v.; Plutarch in vit. Ciceronis; Guasco, p. 105.

† Vetere Arcus Augustorum triumphis, insignis Bolorii, fol.; — Arcus Trajano dedicatus Benevento Porta Aurea dictus, sculpturis et mole omnium facile princeps, Rome, 1739, fol.; — Nol. dei l'Arco Trajano in Benevento, 1770, fol.

‡ Soares sur l'Arc de Septime Severus, et celui de Titus. Paris, 1770

* Columel. xlii. 3. Guasco, p. 321.

† Polyb. l. vi. c. 58.; Plin. l. xxxv. c. 1.; Juv. Sat. viii. 1. Ann. l. iv.

‡ Plut. in Vit. Brut. || Plin. Epist. l. ii.

¶ Plin. l. vii. c. 30.; T. Liv. Hist. l. xxxviii. c. 56.; Iabruzi Via Appia Illust. ab urbe Romæ ad Capuam, 1722, 2 vol. fol.

** Æn. l. iii. v. 2.

†† They were styled "Familiars"—"domestici"—"cubulares," and inscribed "Jovi domestico"—"Apoloni domestico," &c. Cic. pro Domo, 143. 144.

‡ Petron. Arb.; Suet. vit. Calig. c. vii.; Pliny, Epist. l. iii. c. 7.

§ Lampridii in Vita Alex. Severus; Jul. Capitol. in vit. Ant. Pii Hist. Aug. p. 292.

soon carried to an excess. They seemed to contend, who should adorn their houses in town and country with most magnificence. The government of conquered countries supplied them with occasions of doing this. As long as their manners remained uncorrupted, the governors were not permitted to purchase any thing from the people they were set over; because, says Cicero,¹ when the seller is not at liberty to sell things at the price they are worth, it is not a sale on his side, but a violence done to him: *Quod putabant ereptionem esse non emptionem, cum venditori suo arbitratu vendere non liceret.* It is well known, that these wonders of art, performed by the greatest masters, were very often without price:² nor indeed have they any other, than what the imagination, passion, and to use Seneca's expression, the phrenzy of certain people set upon them.³ The governors of pro-

vinces bought what was highly esteemed for little or nothing: and these were very moderate; for most of them made their collections by force and violence.

History gives us instances of this in the person of Verres, prætor of Sicily; who was not the only one that acted in this manner. He indeed carried his impudence in this point to an inconceivable excess, which Cicero knew not by what term to express: passion, phrenzy, folly, robbery!⁴ He could find no name strong enough to convey the idea of it. Neither decency, sense of honour, nor fear of the laws, could restrain him. He reckoned himself in Sicily as in a conquered country. No statue, great or small, of any value or reputation, escaped his rapacious hands. In a word, Cicero affirms, that the curiosity of Verres had cost Syracuse more gods, than the victory of Marcellus had cost it men.⁵

1 Verr. de sign. n. 10.

2 Qui modus est in his rebus cupiditatis, idem est æstimationis. Difficile est enim finem facere pretio, nisi libidini feceris. Verr. de sign. n. 14.

3 Corinthia paucorum furore pretiosa. De brev. vit. c. 12.

bas-reliefs upon the first, refer to the taking of Jerusalem, and describe many of the sacred utensils of the temple. Antiquaries have now decided that those now ornamenting the arch of Constantine belong to the triumphs of Trajan, and have been transferred from the arch once standing in his Forum. But these sculptures in relief are greatly exceeded in point of interest and curiosity by others, which are wrought spirally round the lofty columns of Trajan and Antonine at Rome, and which display a whole system of military antiquities. The total height of Trajan's column is 115 feet 10 inches, and the reliefs are drawn round it 23 times. Delineations of these have engaged the ablest artists, as they contain the whole history of the Dacian war.* It is conjectured that the

* Clacionii Historia utriusque belli Dacici a Trajano Casare gesta ex simulachris que in Columnâ ejusdem Romæ visuntur collecta. Romæ, 1576, fol.; — Fabretti syntagma de Columnâ Trajanâ. 1690, fol.; — Colona Trajana intagliata da P. Santo Bartoli e spiegata da G. P. Bellori. 1704, fol.

4 Venio nunc ad istius, quemadmodum ipse appellat, studium; ut amici ejus, morbum et insaniam; ut Siculi, latrocinium. Ego, quo nomine appellem, nescio. Ibid. n. 1.

5 Sic habetote, plures esse a Syracusanis istius adventu deos, quam victoria Marcelli homines, desideratos. Ibid. n. 131.

Antonine column was erected by M. Aurelius, whose wars with the Marcomanni are the subjects of the reliefs; and although the general plan is similar to that of Trajan's column, it is in every respect greatly inferior in design and execution, and curious only for the exhibition of military antiquities.

In the zenith of Roman wealth and luxury, Bacchic vases and candelabra were elaborately wrought both in marble and bronze, many magnificent specimens of which have come down to modern times. Those found among the ruins of Hadrian's villa at Tivoli have never been excelled. Sarcophagi and cinerary urns, also, were not unfrequently embellished in the highest degree of execution and taste; and the Greek sculptors were allowed to introduce their own mythology and heroic fables into subjects connected with the character and memory of the deceased.—Ed.

* Vignolii Dissertatio de columnâ imp. Antonini Pii. Romæ, 1705, 4to.

OF PAINTING.

ARTICLE I.

Of Painting in general.

SECT. L

*Origin of Painting.**

PAINTING, like all other arts, was very gross and imperfect in its beginnings. The shadow

of a man marked by the outlines gave birth to it, as well as to sculpture. The first manner of painting, therefore, derived its origin from a shadow, and consisted only in some strokes, which multiplying by degrees, formed design. Colour was afterwards added. There was no more than one colour at first in each draught, without any mixture; which manner of painting was called *Monochromaton*, that is to say, of one colour. The art at length improving every

6 Pliny, in his inquiries into ancient painting, attributes its invention to a period long after that in which sculpture was commonly practised both among the Egyptians and Greeks; for he asserts that it was altogether unknown until after the destruction of Troy, and that even lineary portraying, or the drawing of the mere outline of a figure, was first practised by Ardices of Corinth, or Telephanes of Sicily. But this opinion is refuted by the testimonies of other writers, who speak of the ancient practice of the art in Egypt, and by the chests of mummies which are still in existence. Indeed, as to the origin of painting, we may judge, from the common propensities of our nature, that, to a certain extent, it is likely in every nation to have been nearly coeval with the origin of the nation itself, or with that period at which the faculties of observation and imitation began their exercise. It is in vain to attribute its invention to the ingenuity of any one people, and to point out the route by which it spread among neighbouring nations. It must no doubt have advanced by slow degrees to what we may absolutely denominate painting; but the imperceptible approaches to it are apparent in the earliest infancy of society, however rude and savage, which the course of discovery has brought to our knowledge. So as it exists in the wilds of America, at this day, or among the savage islands of the Pacific Ocean, it, we may conclude, existed among the infant nations of Europe when in a similar state of civilization. Savages appear particularly susceptible to the beauty of colours, with which we find them decorating their persons, their implements of war and of the chase; modelling and sculpturing the rude effigies of their superstition; bedecking themselves with the brilliant plumage of birds; and weaving the stained bark into cloth of various designs. The magic of light and shade evidently demands an accuracy of observation not to be looked for in the early stages of society; but in the process of imitation, one step clears the way for a progressive advance; and, unless opposed by extraneous events, mankind naturally proceed from improvement to improvement.

Besides the love of imitation as tending to introduce

the art of painting; its power of being rendered subservient to another equally stimulating principle in our nature, became the means of a very general extension of the practice, even in the earliest stages of society. We allude to that mysterious principle which leads us to solicit the gratification of an ideal prolongation of our existence, by recording our deeds for the information of posterity. The most natural means that can occur to satisfy this desire, is an attempt to represent the appearance of the objects or events we strive to record. Endeavours to attain this end are common to most nations in a state of infancy; and where circumstances have led to its extension or refinement, it becomes a sort of painted language; which, in the progressive efforts to simplify, and to save time and trouble in the performance, very soon assumes the character of a symbolical representation.

The practice of painting among the Egyptians existed doubtless at a very remote period. It is not an easy matter, however, to draw the line of distinction between that art and writing, as practised by them; for the Egyptian letters are nothing else but disguised symbolical paintings. No nation ever made so extensive a use of this medium of record. By it their laws, their mythological system, the remarkable events of their history, their private annals, and the entire scope of their knowledge in philosophy and the sciences, was conveyed; and although it has proved capable of wonderful preservation, it has shown itself greatly deficient in its chief end and object as a record to future ages. Its very improvement operated its defeat. So long as it retained the characteristic of a picture, however rude, it was still to a certain degree intelligible; but as the refinements of the art advanced, and the same object came to be received as expressive of different ideas—as the operation in drawing was gradually simplified, to render it more easy—and as familiarity with the style made a mere indication or symbol be at length thought sufficient for the visible mark of a certain meaning; it happened that, as that mark of meaning did not constitute a language, but only a conventional sign, like the gestures of a deaf

day, the mixture of only four colours was introduced; of which we shall speak in its place.

I do not examine here the antiquity of painting. The Egyptians boast themselves the in-

and dumb person, it became for posterity an enigma, which we may guess at, but can never fully ascertain. And thus became buried in hopeless darkness the laborious chronicles of their monumental pillars, the engraved pictures which cover the bodies of some of their statues, the writings of the subterranean vaults and galleries, in short, all the chaos of symbolical writing preserved with so much care, and to so little purpose.

The Egyptians mixed their colours with some gummy substance, and applied them detached from each other, without any blending or mixture: they appear to have used six colours, viz. white, black, blue, red, yellow, and green. They first covered the canvas entirely with white, upon which they traced the design in black, leaving out the lights of the ground colour. Many of their paintings are described by travellers, who have seen them at Thebes, and in the sepulchral grottos of Upper Egypt. M. Denon mentions having seen some, which he describes as far from inelegant, consisting, in one apartment, of a ceiling ornamented with figures painted of a yellow colour, on an azure ground; represented in different attitudes, and accompanied with a variety of arms, musical instruments, and pieces of furniture. In another apartment, every thing was agricultural—paintings of the plough, and various other implements of husbandry—a man sowing grain on the brink of a canal—fields of rice and harvesting scenes. Another chamber was decorated with a person clothed in white, playing on a harp of eleven strings; several figures were represented without heads, and one with the head cut off, all of them Ethiopians, and painted black, while the persons that were performing the decapitation, and held the sword, were painted red. In whatever attitude the figure is represented, the head is always in profile, and the legs are in the same line, the one advanced a little before the other, and not incorrect in proportion, but without any rounding of light and shade, blending of colours, grouping or perspective.

The Egyptians seldom departed, in painting, from the simplicity of profile: they painted the portraits of their dead upon the linen that enveloped the bodies of the mummy, and seem to have succeeded in producing a wonderful resemblance, considering the imperfection of their art, as the likeness is in general very close to the expression and countenances of their descendants of the present day. These pictures are curious, as being the most ancient specimens of portrait that have reached our time; the colouring has been the part most attended to, and, considering the changeable nature of white lead, which was the pigment in use among them for the ground of their pictures, it argues an uncommon aridity of climate, to find it unaltered after so great a lapse of time.

The art of painting, in so far as the human figure is concerned, must have been much checked in Persia by the peculiar opinions which that people entertained, in common with their neighbours, the Parthians and Arabians. They considered any representation of, or even allusion to, the human figure in a state of nudity, as an outrage to decency. In their statuary, the figures are almost always of men, as the representation of women seems to have been forbidden; and these figures are so encumbered with drapery, and with a profusion of rigid plaitings, as to present a very inelegant and clumsy appearance. Their religious faith was equally inimical to the arts, in discountenancing any visible representation of the Deity. It was the principle of fire which formed

ventors of it; which is very possible: but it was not they who placed it in honour and estimation. Pliny, in his long enumeration of excellent artists in every kind, and of masterpieces of art,

the chief object of their adoration, as identified with Baal or Apollo, though not in general under a visible form. This antipathy may probably account for the circumstance of their invasion and possession of Egypt having produced so little effect, in giving them any taste for the arts as practised in that country.

Of the state of the arts among the Phenicians we know very little. They were a people of great enterprise, as we have seen in a former article, and so early acquainted with the use of writing as to have obtained the credit of the invention; from which it appears probable they had some notion of the arts of imitation. And as they are reported to have been a very handsome race, they are more likely to have had correct notions of beauty in their imitations of it. Solomon, we are informed, sent for Phenicians to build the temple of the Lord; and even so late as the time of the Romans, the most skillful artisans were Carthaginians, a colony from Phenicia; for their knowledge of navigation, and the extent of the trade they carried on, even beyond the coasts of the Mediterranean, enabled their artisans to make a profitable traffic of their skill, in the various countries to which they traded. In their own country, we have the authority of sacred writ for the magnificence of the Tyrians, the splendour of their buildings, their painted chambers, and the richness of their sculptured ornaments. We have absolutely nothing, however, to guide us to any judgment of their acquirements in art, except some remaining specimens of their money, which fall little short of the beauty and perfection of the Greek coinage.

The prohibition of the second commandment—"Thou shalt not make unto thyself any graven image,"—must be understood as pointing only to the worship of images; for Moses, by God's special command, caused images to be made, and that too for the sanctuary, as may be seen in the passages referred to below. But as the Jews employed Phenician artists in all works of embellishment, it is not likely that they themselves much practised the arts, if we except the manufacture of tapestry hangings, the embroidery of which seems to have been a very ancient mode of painting, and certainly the first practised in Greece, as we find mention of it many ages prior to the Trojan war. The history of Philomela, although wrapt up in fable, indicates the manufacture of tapestry pictures at a very remote period; and Homer represents Helen as embroidering pictures of all the misfortunes and battles which her beauty had brought upon the Greeks and Trojans.

From the first dawning of the art among the Greeks, a correct sense of the charm of simplicity and elegance seems to have chastened the eager flights of their genius, and prevented their diverging into those extravagances into which talent is so apt to stray, so soon as it has acquired such facility in the execution of an art as to enable it to minister readily to all the dictates of fancy. More than twenty centuries have elapsed since painting attained this state of advancement in Greece. Almost all that we know of it at this period, with the exception of a few observations to be found in the works of Cicero and some others of the classics, is derived from Pliny. It is easy to distinguish what he records as facts, from the conjectural part of the account, such as the history of the invention of painting, where he adopts the idle story of its origin from the fabulous dreams with which the vanity of

* Exod. xxv. 18—30, and xxxvii. 7—9.

does not mention one Egyptian. It was therefore in Greece, whether at Corinth, Sicione, Athens, or in the other cities, that painting attained its perfection. It is believed to be of later date than sculpture, because Homer, who often speaks of statues, relievos, and carved works, never mentions any piece of painting or portrait.¹

These two arts have many things common to both of them, but attain their end, which is the imitation of nature, by different means: Sculpture by moulding substance; painting by laying colours upon a flat superficies; and it must be confessed that the chisel, in the hands of a man of genius, effects almost as much as the pencil. But without pretending to establish the pre-eminence between these two arts, or to give one the preference to the other, how wonderful is it to

1 Plin. l. xxxv. c. 3.

the Greeks had corrupted their early history. According to them, we not only owe the discovery of this art to the dalliance of an amorous shepherd; but every particular step of its advance towards perfection is the distinct invention of some one of their earliest artists; and this in so very systematical a progression, that, were there no other circumstance to shake the probability of its accuracy, this consideration alone would suffice. To Cleantes, for instance, is given the first step beyond the shepherd's shadow picture, namely, the origin of linear drawing, or tracing the outline; which there is little probability of ever having been the first attempt at art in any country. To this Telephanes added *hatching*, or the improvement of representing shade by crossed lines—a merit which is likewise claimed for another artist, Ardicus; but hatching is obviously a refinement of shading in its simpler form. The next step, according to the fables of the Greeks, was filling up the outline, and completing the figure with one uniform colour like a shadow: to this they gave the name of *monochromatic*, and attributed its invention to Cleophanes of Corinth. The next advance was the distinction of the sexes in the representation of figures, given to Cimon of Cleona; then followed the indication of the muscles, draping, and an attempt to vary the attitude of figures, which till then had been confined to profile; and to Cimon is particularly attributed the merit of departing from the pristine stiffness, and rigid draperies, which cling to the ancient figures of Egypt, by substituting greater fulness, and a more natural disposition of folds. It is of no importance to what individual the art was supposed to be indebted for each step of its progress: the march of improvement advanced in Greece, as it did elsewhere, from very rude beginnings. In the time of Homer, the state of the arts in general was probably not quite so far advanced as the enthusiasm of some of the admirers of that poet leads them to infer. Much refinement in painting, or knowledge of perspective, either linear or aerial, is not to be looked for at this early age; but every authority of ancient history unites to prove, that the art was, to a certain extent, practised, and that representations in basso-relievo were much in use, which implies, at least, a knowledge of design. It is a subject of controversy, whether the decorations described by Homer, as embossed on the shields and armour of his heroes, were sculptured, cast, or painted. The celebrated description which he gives of the shield of Achilles, which has called forth so much

see, that the artist's hand, by the strokes of a chisel, can animate marble and brass; and by running over a canvas with a pencil and colours, imitate by lines, lights, and shades, all the objects of nature! If Pheidias forms the image of Jove, says Seneca, the god seems about to dart his thunders: if he represents Minerva, one would say that she was going to instruct the beholders, and that the goddess of wisdom was only silent out of modesty.² Charming delusion, grateful imposture, which delude without inducing error, and deceive the senses only to enlighten the soul!

2 Non vidit Pheidias Jovem, fecit tamen vultu tonantem: nec stetit ante oculos ejus Minerva, dignus tamen illa arte animus, et concepit deos, et exhibuit. Senec. Contriv. l. v. c. 34.

Verecundè admodum silenti, ut hinc responsuras pauli minus voces prastoleris. Lactant.

discussion, must, at all events, be admitted as an evidence of the taste which existed at that epoch in matters of art, as well as one of the earliest testimonies of Grecian knowledge in composition and design.*

According to Pliny, the most celebrated painters of Greece lived about seven or eight centuries B. C. Of these, ample notices will be found in succeeding pages. At the same time, it may be remarked, that we have but slender materials which can lead us to form a correct judgment of the degree of excellence to which they attained. Their pictures, although painted on solid and durable substances, as larch, box-wood, or fir, the ceilings and walls of buildings, and sometimes even on marble, have almost all perished. This cannot excite wonder when we remember, that the use of oil in painting was probably unknown to the ancients, and that their varnishes, before distillation was invented, were necessarily imperfect, and could not long prevent decay. If the grandest works of Pheidias, although statues of colossal size, are entirely lost, it can scarcely be expected that the pictures of Zeuxis would be preserved. We can entertain, however, very little doubt that there were some excellencies in which the Grecian painters arrived at a high degree of perfection. For if we consider the grandeur and beauty of the works of statuary which, in their time, were placed in every forum and temple, it is impossible to believe that painting could have been held almost in equal esteem with sculpture, unless some of the noblest capabilities of the art had been developed by its followers. Surely, the art which shared with sculpture the admiration of the Athenians must have arrived at a very considerable state of perfection. Still there is reason to believe, that if, in some respects, the ancient painters attained the highest excellence, there were others in which they were far inferior to the moderns. All the pictures enumerated by Pliny consist of a single figure, or of groups of figures representing the human form: landscape was rarely, if ever painted; and it may be doubted, if the first artists understood, with any degree of accuracy, the principles of perspective.—Ed.

* This subject is treated at large in the work of l'Abbé Fraguier, and by M. Boivin, who gives a drawing of the shield, with its multifarious subjects, designed from the description. Pope likewise gives a dissertation on this subject, which he considers to have been a piece of painting; and his knowledge of Homer ought certainly to give great weight to his opinion.

SECT. II.

Of the different parts of Painting. Of the Just in Painting.

Painting is an art, which by lines and colours represents upon a smooth and even surface all visible objects. The image it gives of them, whether of many figures together, or only of one, is called a picture, in which three things are to be considered, the COMPOSITION, the DESIGN, and the COLORIS, or COLOURING; which are the three essential parts in forming a good painter.

1. COMPOSITION, which is the first part of painting, consists of two things: invention and disposition.

Invention is the choice of the objects, which are to enter into the composition of the subject the painter intends to treat. It is either simply historical, or allegorical. Historical invention is the choice of objects, which simply and of themselves represent the subject. It takes in not only true or fabulous history, but includes the portraits of persons, the representation of countries, and all the productions of art and nature. Allegorical invention is the choice of objects to represent in a picture, either in whole or in part, something different from what they are in reality. Such, for instance, was the picture of Apelles, that represented Calumny, which Lucian has described in a passage I shall repeat in the sequel. Such was the moral piece representing Hercules between Venus and Minerva, in which these Pagan divinities are only introduced, to imply the attractions of pleasure opposed to those of virtue.

Disposition very much contributes to the perfection and value of a piece of painting. For how advantageous soever the subject may be, the invention however ingenious, and the imitation of the objects chosen by the painter however just, if they are not well disposed, the work will not be generally approved. Economy and good order gives the whole its best effect, attracts the attention, and engages the mind, by an elegant and prudent disposition of all the figures into their natural places. And this economy and distribution is called disposition.

2. The DESIGN, considered as a part of painting, is taken for the outlines of objects, for the measures and proportions of exterior forms. It regards painters, sculptors, architects, engravers, and all artists in general, whose works require beauty and proportion. Several things are considered in the design: correctness, good taste, elegance, character, diversity, expression, and perspective. My design is to treat the principles of painting only so far as they may be necessary to the reader's understanding what I shall relate of the painting of the ancients, and

to his judging of it with some discernment and propriety.

Correctness is a term by which the painters generally express the condition of a design, when exempt from faults in its measures. This correctness depends upon the justness of proportions, and the knowledge of anatomy.

Taste is an idea either proceeding from the natural genius of the painter, or formed in him by education. Each school has its peculiar taste of design; and since the revival of the polite arts in Europe, that of Rome has always been esteemed the best, because formed upon the antique. The antique is therefore the best taste of design.

Elegance of design is a manner of being that embellishes without destroying the justness of objects. This part, which is of great importance, will be treated more at large in the sequel.

Character is that proper and peculiar mark, that distinguishes and characterizes every species of object, which all require different strokes to express the spirit of their character.

Diversity consists in giving every person in a picture their proper air and attitude. The skilful painter has the penetration to discern the character of nature, which varies in all men. Hence the countenances and gesture of the persons he paints continually vary. A great painter, for instance, has an infinity of different joys and sorrows, which he knows how to diversify still more by the ages, humours, and characters of nations and persons, and a thousand other different means. The most worn-out subject becomes a new one under his pencil.

The word *Expression* is generally confounded in the language of painting with that of *Passion*. They are however different. Expression is a general term, which signifies the representation of an object according to its character in nature, and the use the painter designs to make of it in conformity to the plan of his work. And *Passion*, in painting, is a certain gesture of the body attended with lineaments of the face, which together denote emotion of the soul. So that every passion is an expression, but not every expression a passion.

Perspective is the art of representing the objects in a plan, according to the difference their distance may occasion, either with respect to figure or colour. Perspective therefore is distinguished into two sorts, the lineal and the aërial. The lineal perspective consists in the just contraction or abridgment of lines; the aërial in the just decrease or gradation of colours. This *gradual decrease*, in painting is the management of the strong and faint, in lights, shades, and tints, according to the different degrees of distance or remoteness. Mr. Perrault, out of a blind zeal for the moderns, pretended, that perspective was absolutely unknown to the ancients;

and founded his opinion upon the want of perspective in the column of Trajan. The Abbe Sallier, in a brief but elegant dissertation upon this subject,¹ proves in many passages, that perspective was not unknown to the ancients, and that it was this industrious artifice, which taught them to impose so happily on the senses in their performances, by the modification of magnitudes, figures, and colours, of which they knew how to increase or diminish the boldness and lustre. As to the column of Trajan, if perspective be not exactly observed in it, it is not through ignorance of the rules of art, but because the greatest masters depart from, and even set themselves above, all rule, for the more certain attainment of their end. Mr. de Piles owns, that the defect of gradual decrease or gradation in that pillar is to be ascribed solely to the workman's design, who, superior to the rules of his art, to assist the sight, purposely made the objects stronger and more palpable.

3. The *COLORIS* or *COLOURING*, is different from colour. The latter renders the objects sensible to the eye. The *coloris* or *colouring* is one of the essential parts of painting, by which the painter knows how to imitate the colour of all natural objects, by a judicious mixture of the simple colours upon his pallet. This is a very important part. It teaches the manner in which colours are to be used, for producing those fine effects of the *Chiaro-oscuro* (*light and shade*,) which add boldness and a kind of relief to the figures, and show the remoter objects in their just light.

Pliny explains it with sufficient extent. After having spoke of the very simple and gross beginnings of painting, he adds, that by the help of time and experience, it gradually threw off its defects: that it discovered light and shade with the difference of the colours which set off each other; and that it made use of the *chiaro-oscuro*, the shadowing, as the most exquisite degree and perfection of the *coloris*. For this *chiaro-oscuro* (*light and shade*, or *shadowing*,) is not properly light, but the mean between the lights and shades in the composition of a subject. And from thence the Greeks called it *Tonos*, that is, the tone of painting: to signify, that as in music, there are a thousand different tones, from the insensible union of which the harmony results; so in painting, there is an almost imperceptible force and gradation of light, which still vary, according to the proper or local colours of the different objects upon which they fall. It

is by this enchanting distribution of lights and shades, and, if I may be allowed to say it, by the delusion of this kind of magic, that the painters impose upon the senses, and deceive the eyes of spectators. They employ, with an art never to be sufficiently admired, all the various alloys or diminutions of colour gradually to soften and enforce the colour of objects. The progression of shade is not more exact in nature, than in their paintings.

It is this insinuating charm that strikes and attracts all mankind: the ignorant, the connoisseurs, and even painters themselves. It suffers nobody to pass by a painting that has this character with indifference, without being in a manner surprised, and without stopping to enjoy the pleasure of that surprise for some time. True painting therefore is that which in a manner calls us to it by surprising us: it is only by the force of the effect it produces, that we cannot help going to it, as if to know something it had to say to us. And when we approach it, we really find that it delights us by the fine choice and novelty of the things it presents to our view; by the history and fable it makes us call to mind; and the ingenious inventions and allegories, of which we take pleasure either to discover the sense, or criticise the obscurity. It does more, as Aristotle observes in his *Poetics*. Monsters, and dead or dying men, which we should be afraid to look upon, or should see with horror, we behold with pleasure imitated in the works of the painters. The better the likeness, the fonder we are to gaze upon them. One would think, that the murder of the Innocents should leave the most offensive ideas in the imagination of those, who actually see the furious soldiers butchering infants in the bosoms of their mothers covered with their blood. Le Brun's picture, in which we see that tragical event represented, affects us sensibly, and softens the heart, whilst it leaves no painful idea in the mind. The painter afflicts us no more than we are pleased he should; and the grief he gives us, which is but superficial, vanishes with the painting: whereas had we been struck with the real objects, we should not have been capable of giving bounds, either to the violence or duration of our sentiments.

But what ought absolutely to reign in painting, and constitutes its supreme excellency, is the *True*.² Nothing is good, nothing pleases but the True. All the arts, which have imitation for their object, are solely intended to instruct and divert mankind by a faithful representation of nature. I shall insert here some reflections upon this subject, which I hope will be agreeable

¹ Memoirs of the Acad. of Inscript. vol. viii.

² Tandem se ars ipsa distinxit et invenit lumen atque umbras, differentia colorum alterna vice sese excitante: postea deinde adjectus est SPLENDOR, alius hic quam lumen; quem, quia inter hoc et umbram esset, appellaverunt *Tonos*. Plin. l. xxxv. c. 5.

³ Picturæ probari non debent quæ non sunt simpliciter veritatis. Vitruv. l. vii. c. 5.

to the reader. I have extracted them from a little treatise of Mr. de Piles,¹ upon the *True in painting*; and still more, from a letter of Mr. du Guet annexed to it, which was wrote to a lady, who had desired his opinion of that short tract.

Of the True in painting.

Though painting is only an imitation, and the object in the picture but feigned, it is however called *True*, when it perfectly represents the character of its model.

The true in painting is distinguished into three kinds:—the simple, the ideal, and the compound or perfect True.

The Simple, which is called the first True, is a simple imitation of the expressive movements (*or affections*) of nature, and of the objects, such as they really are and present themselves immediately to the eye, which the painter has chosen for his model: so that the carnations or naked parts of a human body appear to be real flesh, and the draperies real habits, according to their diversity, and each particular object retains the true character it has in nature.

The Ideal True is the choice of various perfections, which are never to be found in a single model, but are taken from several, and generally from the antique.

The third, or Compound True, which is compounded or formed of the simple and ideal True, constitutes in that union the highest excellency of the art, and the perfect imitation of the *Fine Nature*. Painters may be said to excel according to the degree in which they are masters of the first and second True, and the happy facility they have acquired of forming out of both a good composite or compound True.

This union reconciles two things which seem opposites: to imitate nature, and not confine one's self to that imitation; to add to its beauties, and yet correct it to express it the better.

The Simple True, supplies the movements (*affections or passions*) and the life. The Ideal chooses with art whatever may embellish it, and render it more striking; but does not depart from the Simple, which, though poor in certain parts, is rich in its whole.

If the second True does not suppose the first, if it suppresses or prevents it from making itself more sensible than any thing the second adds to it, the art departs from nature; it shows itself instead of her; it assumes her place instead of representing her; it deceives the expectation of the spectator and not his eyes; it apprizes him of the snare, and does not know how to prepare it for him.

If, on the contrary, the first True, which has all the real of affection and life, but not always the dignity, exactitude, and graces to be found elsewhere, remains without the support of the second True, which is always grand and perfect, it pleases only so far as it is agreeable and finished, and the picture loses every thing that was wanting in its model.

The use therefore of the second True consists in supplying in each subject what it had not, but what it might have had, and what nature has dispersed in several others; and in thus uniting what she almost always divides. This second True, strictly speaking, is almost as real as the first: for it invents nothing, but collects universally. It studies whatever can please, instruct, and affect. Nothing in it is the result of chance, even when it seems to be so. It determines by the design what it suffers to appear but once; and enriches itself with a thousand different beauties in order to be always regular, and to avoid falling into repetitions. It is for this reason that the union of the Simple and Ideal True have so surprising an effect. For that union forms a perfect imitation of whatever is most animated, most affecting, and most perfect in nature. All then is probable, because all is true: but all is surprising, because all is curious and extraordinary. All makes impression, because all has been called in that was capable of doing so; but nothing appears forced or affected, because the Natural has been chosen, in choosing the wonderful and the perfect. It is this fine Probable, which often appears more true than truth itself: because in this union the first True strikes the spectator, avoids various defects, and exhibits itself without seeming to do so. This third True (*or union*) is an end to which none ever perfectly attained. It can only be said, that those who have come nearest to it, have most excelled.

What I have said hitherto of the essential parts of painting, will facilitate the understanding of what I shall soon add of the painters themselves, in the brief account I shall give of them. The greatest masters agree, that there never was a painter who entirely excelled in all the parts of his art. Some are happy in Invention, others in the Design: some in the *Coloris*, others in Expression: and some paint with abundance of grace and beauty. No one ever possessed all these excellencies together. These talents, and many others which I omit, have always been divided: the most excellent painter is he, who possesses the most of them. To know the bent of nature is the most important concern. Men come into the world with a genius determined not only to a certain art, but to certain parts of that art, in which only they are capable of any eminent success. If they quit their sphere, they fall below even mediocrity

1 M. de Piles' Cours de Peinture. Paris edit.

in their profession. Art adds much to natural endowments, but does not supply them where they are wanting.² Every thing depends on genius. The aptitude a man has received from nature to do certain things well and with ease, which others cannot do but very ill though they take great pains, is called genius. A painter often pleases without observing rules; whilst another displeases though he does observe them, because the latter has not the happiness to be born with a genius.³ This genius is that fire which exalts painters above themselves, imparts a kind of soul to their figures, and is to them what is called spirit, rapture, or enthusiasm in poetry.

For the rest, though a painter does not excel in all the parts of his art, it does not follow, that most of the works of the great masters should not be considered as perfect in their kind, according to the measure of perfection of which human weakness is capable. The certain proof of their excellency is the sudden impression they make alike upon all spectators, ignorant and skilful; with this sole difference, that the first only feel pleasure in seeing them, and the latter know why they are pleased.⁴ In regard to works of poetry or painting, the impression they have upon us, is a judgment not to be despised. We weep at a tragedy, or at the sight of a picture, before we reflect whether the object exhibited by the poet or painter be capable of moving us, or well imitated. The impression has told us that, before we think of such an inquiry. The same instinct, which at first sight would draw a sigh from us, on meeting a mother following her son to the grave, has a like effect, when the stage or a painting shows us a faithful representation of a like event. The public therefore is capable of judging aright of verses and painting; because, as Cicero observes, all men, by the sense implanted in them by nature, know, without the help of rules, whether the productions of art be well or ill executed.⁵

The reader will not be surprised that I make a parallel here between painting and poetry. All the world knows the saying of Simonides, *A picture is a silent poem, and a poem a speaking picture.* I do not examine, which of the two

succeeds best in representing an object and painting an image. That question would carry me too far. It has been very well treated by the author of the critical reflections upon poetry and painting, from whom I have borrowed many things on this point. I content myself with observing, that as a picture, which represents an action, shows us only the instant of its duration, the painter cannot express many affecting circumstances, which precede or follow that instant, and still less make us sensible of the passions and discourse which very much exalt their spirit and force: whereas a poet has it in his power to do both at his leisure, and to give them their due extent.

It only remains for me, before I proceed to the history of the painters, to give a brief idea of the several species of painting.

SECT. III.

*Different species of Painting.**

Before the secret of painting in oil was discovered, all the painters worked either in fresco or water colours.

6 Of the various modes of painting, consisting of oil, fresco, water colours both body and transparent, mosaic, enamel, glass, porcelain, tapestry, and what the French call pastel and camayeux, there is but the first which is peculiar to modern practice; although even with regard to it, there is reason to suspect that the varnish used by Apelles and his successors was not very different from oil painting. Until the seventh century before the Christian era, the Greeks seem to have been confined to the simple operation of designing with only one colour, to which the colour of the ground formed a relief. This was called by them monochromatic, and is styled camayeux by the French. Some of the Egyptian hieroglyphics are executed in this manner; the Etruscan vases also furnish abundant examples of it, consisting of a simple coloured back ground of black or orange, upon which the figures are drawn in contrast with the ground colour. When the ancients began to introduce more colours into their works, it was looked upon as degrading the art, and was confined at least to the use of a very few, in which case it was called polychromatic. We find Pliny and Cicero lamenting the corruption of taste in their day, by the introduction of a gaudy mode of painting, abounding in variety of colours, more than grace and purity of taste.

Sir Humphry Davy, in a valuable memoir upon the colours used in the paintings of the ancients, published in the Philosophical Transactions, considers the Greek and Roman painters to have been possessed of almost all the colours used by the great artists of the Italian school at the period of the revival of arts in Italy, with the addition of two, not known to the latter, namely, the Egyptian or Vestorian azure, and the Tyrian or marine purple. It is the opinion of Sir Humphry, that the ancient painters, like the best masters of the Roman and Venetian schools, were sparing in the use of the more florid colours, and produced their effects, like them, by contrast and tone; admitting little more than the red and yellow ochres,

2 Ut vere dictum est caput esse artis, decere quod facias: ita id neque sine arte esse; neque totum arte tradi potest. *Quinctil.* l. xi. c. 3.

3 In quibusdam virtutes non habent gratiam, in quibusdam vitia ipsa delectant. *Ibid.*

4 Docti rationem artis intelligunt, indocti voluptatem. *Quinctil.* l. ix. c. 4.

5 Illud ne quis admiretur quonam modo hæc vulgus imperitorum notet, cum in omni genere, tum in hoc ipso, magna quondam est vis incredibilisque natura. Omnes enim tacito quodam sensu, sine ulla arte aut ratione, quæ sint in artibus ac rationibus recta ac prava dijudicant. *Cic.* l. iii. *de orat.* n. 193.

* Phil. Trans. for 1615.

Fresco is a kind of painting upon fresh plaster with colours mixed with water.¹ This work was done either upon walls or arched roofs. The painting in *fresco*, incorporating with the plaster, decayed and mouldered only with it. The walls of the temple of the Dioscuri² at Athens had been painted in *fresco* by Polygnotus and Diognetus, during the Peloponnesian war. Pausanias observes, that these paintings had been well preserved to his time, that is, almost six hundred years after Polygnotus. The good painters, however, according to Pliny, seldom painted in *fresco*. They did not think it proper to confine their works to private houses, nor to leave their irretrievable masterpieces at the mercy of the flames. They fixed upon portable pieces, which, in case of accident, might be saved from the fire, by being carried from place to place. All the monuments of those great painters, in a manner kept guard in palaces, temples, and cities, in order to be ready to quit them upon the first alarm; and a great painter, to speak properly, was a common and public treasure, to which all the world had a right.³

Painting in water colours is a kind performed

black and white, in their best works: but gold was sometimes introduced, as in the early Italian school. The colours enumerated by Pliny as in use among the ancients amount to nine: 1st, *Sinopia pontica*, a sort of ochre; 2d, *Paratonion*, a white colour, found on the shores of Egypt; 3d, *Purpurissum*, a deep red; 4th, *Indicus color*, a fine blue; 5th, *Armenium*; 6th, *Cinnabar*; 7th, *Minium*; 8th, *Auripigmentum*, a fine green; and 9th, *Atramentum*. This list shows that the ancients were not ignorant of our principal colours, and might by combination have produced almost every tint.—*Ed.*

1 Of the ancient stucco or *fresco* paintings, we have examples still preserved in the relics of Herculaneum, in which no particular is more remarkable than the very great ease of the flowing outline, which, though deeply marked, possesses all the spirit of a masterly sketch. Many fine examples are also preserved at Pompeii, besides what were discovered in the ancient baths of Rome. The plaster was prepared with great care, for which various articles were selected, and laid on in different coats: volcanic ashes, or *terra pozzulana*, was the first, and upon this a coat of calcareous matter, finely prepared, followed. The plaster was generally allowed to dry before the paint was applied, usually consisting of black, red, or white, if brilliancy was required, to serve as a ground colour. The colours were mixed with a very strong glue. The arabesque paintings seem to have been the favourite subject of the ancient *frescos*, representing capricious compositions of every variety, and generally displaying very considerable elegance and taste, as well as fertility of invention. Raphael was much captivated by the merit of these ancient performances, and not only revived that mode of ornamental work, but made very great use of it, as his immortal works in the lodges of the Vatican testify.—*Ed.*

2 Castor and Pollux were so called, because the sons of Jupiter.

3 *Omnis eorum ars urbibus excubabat, pictorque communis terrarum erat.*

with colours, diluted only with water, and size or gum.

The invention of painting in oil was not known to the ancients. It was a Flemish painter, named John Van Eyck, but better known by the name of John of Bruges, who discovered this secret, and used it in the fifteenth century. This invention, which had been so long unknown, consists however only in grinding the colours with oil of walnuts or linseed. It has been of great service to painting, because all the colours mingling better together, make the colour or colouring more soft, delicate, and agreeable; and give a smoothness and mellowness to the whole work, which it could not have in the other methods. Paintings in oil are done upon walls, wood, canvas, stones, and all sorts of metals. It is said that the ancient painters painted only upon tables of wood, whitened with chalk, from whence came the word *tabula*, a picture; and that even the use of canvas amongst the moderns is of no great standing.⁴

Pliny, after having made a long enumeration of all the colours used in painting in his times, adds, "Upon the sight of so great a variety of colours, I cannot forbear admiring the wisdom and economy of the ancients. For with only the four simple and primitive colours, the painters of antiquity executed their immortal works, which are to this day our admiration: the white of Melos, the yellow of Athens, the red of Sinope, and the common black."⁵ These are all they used, and yet it was with these four colours well managed, that an Apelles, and a Melanthus, the greatest painters that ever lived, produced those wonderful pieces, of which only one was of such value, that the whole wealth of a great city were scarce sufficient to purchase it." It is probable that their works would have been still more perfect, if to these four colours two more had been added, which are the most general and the most amiable in nature; the blue which represents the heavens, and the green which so agreeably clothes and adorns the whole earth.⁶

The ancients had a manner of painting much in use even in Pliny's time, which they called *Caustick*.⁷ It was a kind of painting in wax, in which the pencil had little or no part.⁸ The whole art consisted in preparing wax of different

4. *Nero princeps jussit colosseum se pingi 180 pedum in linteis, incognitum ad hoc tempus. Plin. l. xxxv. c. 7.*

5. *Quatuor coloribus solis immortalia illa opera fecere — Apelles, Melanthius.—clarissimi pictores, cum tabulæ eorum singulæ oppidorum varentur opibus. Plin. l. xxxv. c. 11.*

6. See a preceding Note.—*Ed.*

7. This word is derived from *καίω*, which signifies to burn.

8. *Ceris pingere, ac picturam inurere quis primus excogitaverit, non constat. Plin.*

colours, and in applying them upon wood or ivory by the means of fire.*

MINIATURE is a kind of painting done with simple and very fine colours, mixed with water and gum without oil. It is distinguished from other paintings by its being more delicate, requiring a nearer view, not being easily performed except in little compass, and only upon vellum, or tablets of ivory.

Paintings upon glass are done in the same manner as upon jasper and other fine stones: but the best manner of executing it is by painting under the glass, that the colours may be seen through it. The art of incorporating the colours with the glass was known in former days, as may be seen at La Sainte Chapelle, (*our Lincoln-Inn chapel*,) and in abundance of other churches. This secret is said to be lost.

Enamel painting. Enamel is a kind of glass coloured. Its principal substance is tin and lead in equal quantities, calcined in the fire; to which are added separately such metallic colours as it is to have. The painting and work performed with mineral colours by the heat of the fire, is called also *Enamelling*. China, Delft, and pots varnished or glazed with earth, are so many different kinds of *Enamel*. The use of *Enamelling* upon earth is very ancient, as vessels enamelled with various figures were made in the time and dominions of Porsenna king of the Tuscans.

*Mosaic work*¹⁰ is composed of many little pieces

inlaid, and diversified with colours and figures cemented together upon a bottom of plaster of Paris.¹¹ At first compartments were made of it to adorn ceilings and floors. The painters

11 Or stucco, a composition of lime and white marble powdered.

tinily by *lithostrata parvulis crustis ac tessellis junctis in varios colores*. Athenæus * speaks of the rich pavements in the palace of Demetrius Phalerius; and Hiero, king of Syracuse, is said, by the same author, to have had an extraordinary ship constructed, in which the tessellated pavements of the cabins represented the whole fable of the Iliad. Suetonius mentions, that Julius Cæsar had such pavements carried every where along with him, to exclude the damps of the northern climates which he visited. There were several kinds of mosaic; one where the morsels of marble used were pretty large, which was called *scutellæ*; and one where the cubes were very small, which was called *tessellated pavement*. The art of colouring glass practised in the age of Augustus greatly promoted the use of mosaic; it became so common that we find Seneca complaining of the luxury of his contemporaries, in seeming unwilling to tread, unless upon precious stones: "Eo deliciarum pervenimus, ut nisi gemmas calcare nolumus." Mosaic painting began to decline about the fifth and sixth centuries, and is supposed to have been almost totally lost, until Andrea Taffi learned it from a Greek artist, Apollonius, who was employed on the church of St. Mark at Venice, in the thirteenth century. This is to be viewed as the source of the modern mosaic, which has attained a much greater perfection than that of the ancients.

One of the finest ancient mosaic pavements extant, supposed to have been constructed anterior to the reign of Domitian, was discovered at a village near Seville in Spain, towards the close of the last century, at the depth of three feet and a half from the surface, from a description of which the nature of others may be comprehended. It extends above 40 feet in length, by nearly 30 in breadth, and contains a representation of the circus games in a parallelogram in the centre, three sides of which are surrounded by circular compartments, containing portraits of the Muses, interspersed with the figures of animals, and some imaginary subjects. In the race course are seen a chariot overturned, the charioteer thrown out of his seat, horsemen dismounted, fractious steeds, and broken harness. The charioteer, having been injured by his fall, is supported by two men belonging to a different faction or party, as may be ascertained by their costume, which, in all the figures, is well represented. The horses are of a deep brown colour; they have a cut-tail, like our modern fashion, and are apparently full of spirit. Various persons interested in the games appear in other portions of the course and beyond it; but part of the whole pavement has been destroyed by the waste of time, and the injury of the workmen by whom it was discovered. A double row of circular compartments bound the sides of the course, some of which are very entire. Each is about three feet and a half in diameter, ornamented by a broad circular border as a frame. The whole plan is finished by an exterior border, highly embellished. Nine of these compartments are occupied by busts of the nine Muses, arranged after the manner prescribed by Hesiod, and in the order of the books of Herodotus, but alternately, so that a compartment containing a mask, or an animal, or some other subject, is

9 Our information of the encaustic mode of painting practised by the ancients is very limited, as no specimens of that kind have reached our day, and ancient writers have left no particular account regarding it. According to Pliny, it would appear that the colours mixed with wax were made up into crayons, and melted as used on the picture, upon which the subject was previously traced with a metal point; when the picture was finished, a waxen varnish was spread over all, in a melted state. By this means the colours obtained great brilliancy, and the work became protected from the injuries of the weather. The surface, after it was sufficiently dry, was well polished. Various attempts have been made in modern times to revive this art, but as yet without perfect success. Indeed, the introduction of the more perfect system of oil-painting seems to supersede altogether the occasion for its re-discovery, except to gratify antiquarian curiosity. The ancients made use of encaustic painting in ornamenting their ships.—*Ed.*

10 This species of painting, like other branches of the fine arts, seems to have originated in the east, to have been perfected in Greece, and thence transferred to Rome. It became so prevalent in both of these latter countries, as a favourite mode of ornamenting their buildings, that remains of it are discovered wherever any vestiges of ancient towns appear. The name *Mosaicum* was only applied to it about the fourteenth century. The words *pavimenta Lithostrata, scutilla, scetla, or tessellata*, were used to denote mosaics properly so understood by the ancients. Isidorus * designs real mosaic very dis-

* De Origin. lib. xv. cap. 8.

* Lib. xiii. § 60. and lib. v. § 41.

† Ep. lxxxvi.

afterwards undertook to cover walls with it, and to make various figures, with which they adorned their temples and many other edifices. They used glass and enamel in these works, which they cut into an infinity of little pieces of different sizes and colours: these having an admirable lustre and polish, had all the effect at distance that could be desired, and endured the inclemencies of the weather as well as marble. This work had the advantage in this point of every kind of painting, which time effaces and consumes; whereas it embellishes the mosaic, which subsists so long, that its duration may almost be said to have no end. There are several fragments of the antique mosaic to be seen at Rome, and in several other parts of Italy. We should form an ill judgment of the pencil of the ancients, if we were to find it upon these works. It is impossible to imitate, with the stones and bits of glass used in this kind of painting, all the beauties and graces the pencil of an able master gives a picture.

ARTICLE II.

Brief history of the most famous Painters of Greece.

I propose to speak only in this place of the most celebrated painters, without examining who were the first that used the pencil. Pliny, in the eighth, ninth, and tenth chapters of the thirty-fifth book of his *Natural History*, will supply me with a great part of what I have to say. I shall content myself with observing this

always interposed between two. The floor also between the different compartments exhibit various birds, fruits, and flowers. *

Another fine mosaic pavement, ascribed to the first century of the Christian era, was discovered at Lyons in 1806. Its subject is similar to that of the preceding, but it is of smaller dimensions. † Another valuable specimen, is the exquisite little picture of the four pigeons at the Museum of the capital of Rome. The pigeons are represented on the edge of a basin filled with water, out of which one of them is drinking. It is a work of singular truth and elegance, and has been frequently copied. It was found at Hadrian's villa of Tivoli, and was bought by Pope Clement XIII. for 13,000 crowns. The ordinary subjects of mosaics seem to have been the Circensian games, theatrical scenes, marine deities, tritons, and nereids. Many of them were devoted to the embellishment of halls and baths, and exhibited lively representations; but with the decay of the Roman empire, they were employed in the decoration of churches, and their subjects altered to those of a grave character.—*Ed.*

* See the work of M. Laborde on the Mosaics of Italy, for further illustrations of this composition.—Respecting the mosaics which have been discovered at different times in Britain, which was so long a Roman province, considerable information will be found in the *Archæologia* and *Monumenta Vetusta*, two works published by the London Society of Antiquaries.

† See Artaud, Description d'un Mosaïque.

once for all, and shall cite him but seldom any more.

PHIDIAS AND PANENUS.

Phidias, who flourished in the 84th Olympiad, A. M. 3560, was a painter before he was a sculptor. He painted at Athens the famous Pericles, surnamed the Olympic, from the majesty and thunders of his eloquence. I have spoken at large of Phidias in the article of sculpture. Panenus his brother distinguished himself also amongst the painters of his time. He painted the famous battle of Marathon, in which the Athenians defeated the whole army of the Persians in a pitched battle. The principal officers on both sides were represented in this piece as large as the life, and with exact likeness.¹

POLYNOTUS.

Polygnotus, the son and disciple of Aglaophon, was of Thasos, an island in the north of the Egean sea. He appeared before the 90th Olympiad, A. M. 3582. He was the first that gave some grace to his figures: and contributed very much to the improvement of the art. Before him no great progress had been made in that part which regards expression. He at first cast some statues: but at length returned to the pencil, and distinguished himself by it in different manners.

But the painting which did him the most honour in all respects, was that which he performed at Athens in the Παναθεναι, in which he

1 This circumstance implies a pretty advanced state of the arts at this period, for Panenus flourished 448 years before the Christian era; but it is possible that the painter resorted to the surer and simpler means of indicating the persons intended by his figures, by writing their names under each; a practice not unfrequent among Greek artists, and which takes away from the boasted merit of resemblance. The picture was afterwards hung up for public inspection in the portico of the Pæcile at Athens.—Panenus was employed in decorating the wall which surrounded the statue of Jupiter Olympius at Elis, and an account of the subjects of the painting which he executed on that occasion, is preserved in the ancient descriptions of the statue. These were, Atlas sustaining the heavens and the earth, with Hercules relieving him of his burden; figures of Theseus and Perithous; emblematic figures, representing Greece and Salamis, the latter holding a rostrum; Ajax under the reproach of Cassandra; the strife of Hercules with the Nemean lion; Hyppodamia, daughter of Cœnoaus, with her mother; Prometheus chained, with Hercules advancing to his assistance; Prometheus delivered by Hercules; Achilles supporting Pentesiles dying; and the two Hæperides bearing golden apples. In the time of this artist, prizes were given at Corinth and Delphos for excellence in painting; for one of which he contended with a painter named Timagoras; but it does not appear which of them gained the victory.—*Ed.*

2 This was a portico, so called from the variety of the paintings and ornaments with which it was embellished.

represented the principal events of the Trojan war.³ However important and valuable this work was, he refused to be paid for it, out of a generosity the more estimable as uncommon in persons who make money of their arts. The council of the Amphictyons, who represented the states of Greece, returned him their thanks by a solemn decree, in the name of the whole nation, and ordained, that in all the cities to which he should go, he should be lodged and maintained at the public expense. Mycon, another painter, who worked upon the same portico,⁴ but on a different side, less generous, and perhaps not so rich as Polygnotus, took money, and by that contrast augmented the glory of the latter.

APOLLODORUS.

This painter was of Athens, and lived in the 93d Olympiad, A. M. 3596. It was he that at last discovered the secret of representing to the life, and in their greatest beauty, the various objects of nature, not only by the correctness of design, but principally by the perfection of the coloris, and the distribution of shades, lights, and chiaro-oscuro; in which he carried painting to a degree of force and delicacy it had never been able to attain before. Pliny observes, that before him there was no painting which in a manner called upon and seized the spectator: *Neque ante eum tabula ullius ostenditur, quæ teneat oculos.* The effect every excellent painting ought to produce is to fix the eyes of the spectator, and to attract and keep them in admiration. Pliny the younger, after having described in a very lively manner a Corinthian antique, which he had bought, and which represented an old man standing, concludes that admirable description with these words: "In fine, every thing in it is of a force to engage the eyes of artists, and to delight those of the unskilful." *Talia denique omnia, ut possint artificum oculos tenere, delectare imperitorum.* Plin. Ep. 6. l. 3.

3 For a very minute description of this and other paintings of Polygnotus, see Pausanias. We refrain from quoting it.—Ed.

4 In the temple of the Dioscorides at Athens, Mycon united also his labours with those of Polygnotus; for we are told by Pausanias, that Mycon painted there Jason, and the heroes who accompanied him in his expedition to Colchos. Amongst them Acastus, with his horses, were introduced; and the whole picture, says Pausanias, was admirably represented. Mycon excelled in the delineation of horses, in which branch of the art he had a rival in Pauson, of whom the following anecdote is recorded by Plutarch. Pauson had received a commission to paint the picture of a horse rolling on his back. He represented the animal, however, galloping; and when the purchaser complained that his order was not executed, Pauson desired him to turn the picture upside down, and

ZEUXIS.

Zeuxis was a native of Heraclea,⁵ and learnt the first elements of painting about the 85th Olympiad, A. M. 3564. Pliny says,⁶ that having found the door of painting opened by the pains and industry of his master Apollodorus, he entered without difficulty, and even raised the pencil, which already began to assume a lofty air, to a very distinguished height of glory. *The gate of the art* means here the excellency of colouring, and the practice of the chiaro-oscuro, light and shade, which was the last perfection painting wanted.⁷ But as those who invent do not always bring their inventions to perfection,

he would find that it was so. If this was not a jest of the day upon the painter's imperfections, it seems to indicate that pictures were then painted, as we see on Etruscan vases, like basso-relievos, without either ground or sky. In design, the picture must, at any rate, have been very imperfect, to admit of the energetic play of the muscles and limbs, in the action of galloping, having any resemblance, when reversed, to the loose motions of a horse rolling.—Ed.

5 It is not known which Heraclea authors mean, for there were several cities of that name. Some seem to suppose it Heraclea in Macedonia, or that in Italy near Crotona.

6 Ab hoc (Apollodoro) fores apertas Zeuxis Heracleotes intravit—audentemque jam aliquid penicillum ad magnam gloriam perduxit.

7 Zeuxis studied either under Demophilus or Neseas, artists respecting whom nothing is known, but that one of them was his master. He seems to have rapidly arisen to the highest distinction in Greece, and acquired, by the exercise of his art, not only renown, but riches. He was honoured with the friendship of Archelaus, king of Macedonia, for whose palace he executed numerous pictures. Cicero informs us, that the inhabitants of Crotona prevailed on Zeuxis to come to their city, and to paint there a number of pictures, which were intended to adorn the temple of Juno, for which he was to receive a large sum. On his arrival, he informed them that he intended to paint only the picture of Helen, with which they were satisfied, because he was regarded as peculiarly excellent in the delineation of women. He, accordingly, desired to see the most beautiful maidens in the city, and having selected five whom he preferred, copied all that was beautiful and perfect in the form of each, and thus completed his Helen. The names of those five beauties were celebrated by the poets, from having been thus selected by the judgment of Zeuxis. Pliny, in his relation of the same circumstance, omits to give the particular subject of the painting, and states that the whole occurred, not among the people of Crotona, but those of Agrigentum, for whom, he says, the piece was executed, to fulfil a vow made by them to the goddess. It seems probable, that Zeuxis painted another Helen, which was placed in Rome, in the portico of Philip, and was in existence in the lifetime of Pliny. Under this he inscribed the beautiful verses of Homer,⁸ representing the old counsellors of Priam as softened at the appearance of her beauty, and acknowledging that she was an object for which both

* *Iliad* l. 154.

Zeuxis, improving upon his master's discoveries, carried those two excellent parts still farther than him. Hence it was, that Apollodorus, exasperated against his disciple, for this species

Trojans and Greeks might reasonably endure all the calamities of protracted war.

— No wonder such celestial charms,
For nine long years have set the world in arms.
What winning graces! what majestic mien!
She moves a goddess, and she looks a queen!
Pope's Iliad, iii. 205.

Besides his Helens, the most reputed of the pictures of Zeuxis were, the infant Hercules strangling the serpents in his cradle in the sight of his parents; a Penelope, in which her modesty was as strikingly developed as her beauty; a representation of Jupiter seated on his throne, with all the gods around doing him homage; a Marsyas bound to a tree, which was preserved at Rome; and the Wrestler, noticed in the text. Lucian has left us a description of another of his pieces, representing the Centaurs, of which he says it was a masterly performance, full of many drolleries, very proper to the subject, and finely imagined.

Zeuxis, though he bore away the palm from all who had gone before him in the art, was yet not altogether free from the hardness of manner which prevailed in the works of his predecessors. It was remarked that he made his heads somewhat too big, and that the limbs of his figures were too heavy and muscular; so that the art in him was not considered as having reached its highest degree of eminence; but these remarks might only have regard to his earlier productions. Amongst his particular excellencies, that of having well understood the disposition of light and shade was attributed to him. He made use of very few colours, never exceeding four, and at times painted in the monochromatic style, with only two. He is said to have taken a long time to finish his chief productions; observing, when reproached for his slowness, that he was painting for eternity. A better saying than this is recorded of him. Once, when Megabizus was censuring some pictures of particular excellence, some boys, who were employed in preparing colours, began to laugh; upon which Zeuxis said to him, "So long, my good Sir, as you held your tongue, these boys, from your fine clothes and the ornaments of your dress, admired you; but ever since you opened your mouth, they have been making a joke of you. If, therefore, in future, you would wish to retain your character, take this advice—Be silent."

Rollin has not scrupled to represent Zeuxis as ostentatious, proud, and arrogant: but it is due to his genius surely, to be cautious in annexing unfavourable constructions to such imperfect fragments and memorials of his character as have reached us. One of the grounds of Rollin's accusation is the inscriptions written under his works, and that to his Wrestler is given as an instance; but the customs of those days seem to have allowed of such inscriptions, and they may sometimes have been intended as incitements to emulation. Of Apelles, whose modesty was as remarkable as his merits, we are told, that, while he allowed to every other artist the praises which they were entitled to, he did not scruple to assert, that in point of what is called Grace, in the art, he himself stood alone. The exhibition which Zeuxis made at the Olympic games, dressed, as Rollin has it, "in a robe of purple, with his name embroidered upon it in letters of gold," was, it must be admitted, extremely ludicrous;

of robbery so honourable to him, could not forbear reproaching him with it very sharply by a satire in verse, in which he treated him as a thief, who, not content with having robbed him of his art, presumed to adorn himself with it in all places as his lawful right. All these complaints had no effect upon the imitator, and only served to induce him to make new efforts to excel himself, after having excelled his master. He succeeded entirely in his endeavours, by the admirable works he performed, which at the same time acquired him great reputation, and great riches. His wealth is not the happiest part of his character. He made a puerile ostentation of it. He was fond of appearing and giving himself great airs, especially on the most public occasions, as in the Olympic games, where he showed himself to all Greece dressed in a robe of purple, with his name embroidered upon it in letters of gold.

When he became very rich, he began to give away his works liberally, without taking any thing for them. He gave one reason for this conduct, which does no great honour to his modesty. *If, says he, I gave my works away for nothing, it was because they were above all price.*¹ I should have been better pleased if he had let others say so. An inscription which he affixed to one of his pieces does not argue more modesty. It was the figure of an *ATHLETA*, or Wrestler, which he could not forbear admiring, and extolling as an inimitable masterpiece. He wrote at the bottom of it a Greek verse, of which the sense is;

A l'aspect du luteur, dans lequel je m'admire,
En vain tous mes rivaux voudront se tourmenter;
Ils pourront peutetre en medire
Sans pouvoir jamais l'imiter.²

but the particular time and place at which he made this display should be considered:—it was at the festival in honour of Jupiter Olympius, the chief design of which was to confer distinctions of merit, and where every one vied with another in personal magnificence. Of the saying of Zeuxis, when he liberally gave away his works without pecuniary reward, "because they were above all price," it may only be remarked, that envy and illiberality have too often their share of operation in the promulgating of such assertions, and when the deed is praiseworthy, let us be backward in attaching to it unamiable motives.—In endeavouring to alleviate the charges brought against the character of Zeuxis, his conduct in the contest with Parrhasius, as recorded in the text, should not be overlooked. If he had been either ostentatious or arrogant, that was the time to show it; yet he not only "confessed himself conquered," but allowed every merit to the ingenuity of his rival.—*Ed.*

1 Postea donare opera sua instituit, quod eo nullo satis digno pretio permutari posse diceret. *Phn.*

2 These verses are by the author of *L'Histoire de la Peinture Ancienne*, extracted from the 35th book of Pliny's *Natural History*, which he has translated, or rather paraphrased, with the Latin text. This book was printed at London in 1725. There are excellent reflections on it, of which I have made great use.

My Wrestler, when my rivals see,
They hate its wondrous charms and me;
A thousand things perhaps they blame;
But ne'er could imitate the same:

The Greek verse is in Plutarch,³ but applied to the works of Apollodorus. It is:

Μακρόνταί τις μάλλον, ἢ μιμήνται.

This is more easy to criticise than imitate.

Zeuxis had several rivals, of whom the most illustrious were Timanthes and Parrhasius. The latter was competitor with him in a public dispute, for the prizes of painting. Zeuxis, in his piece, had represented grapes in so lively a manner, that, as soon as it was exposed, the birds came to peck at them. Upon which, in a transport of joy, and highly elated at the declaration of such faithful and undeniable judges in his favour, he called upon Parrhasius to produce immediately what he had to oppose to his picture. Parrhasius obeyed, and showed a painting seemingly covered with a fine piece of stuff in form of a curtain. Remove your curtain, added Zeuxis, and let us see this masterpiece. That curtain was the picture itself, and Zeuxis confessed himself conquered. *For, says he, I only deceived the birds, but Parrhasius has deceived me, who am myself a painter.*⁴ The same Zeuxis, sometime after, painted a young man carrying a basket of grapes: and seeing that the birds came also to peck at them, he owned, with the same frankness, that if the grapes were well painted, the figure must be done very ill, because the birds were not afraid of it.

Quintilian informs us, that the ancient painters used to give their gods and heroes the same features and characters as Zeuxis gave them, from whence he was called the Legislator.⁵ Festus relates, that the last painting of this

master was the picture of an old woman, which work made him laugh so excessively, that he died of it. It is surprising that no author should mention this fact but Verrins Flaccus, cited by Festus. Though it is hard to believe it, says Mr. de Piles, the thing is not without example.

PARRHASIUS.

Parrhasius was a native of Ephesus, the son and disciple of Evenor, and, as we have seen, the rival of Zeuxis. They were both esteemed the most excellent painters of their time, which was the most glorious age of painting; and Quintilian says, they carried it to a high degree of perfection, Parrhasius for design, and Zeuxis for the colouring.⁶

Pliny gives us the character and praise of Parrhasius at large. If we may believe him, the exact observation of symmetry was owing to that master; and also the expressive, delicate and passionate airs of the head; the elegant disposition of the hair; the beauty and dignity of features and person; and by the consent of the greatest artists, that finishing and boldness of the figures, in which he surpassed all that went before, and equalled all that succeeded him. Pliny considers this as the most difficult and most important part of painting. For, says he, though it be always a great addition to paint the middle of bodies well, it is however what few have succeeded in. But to trace the contours, give them their due decrease, and by the means of those insensible weakenings, to make the figure seem as going to show what it conceals; in these certainly the perfection of the art consists.⁷ Parrhasius had been formed for painting by Socrates, to whom such a disciple did no little honour.

Xenophon has preserved a conversation, short indeed, but rich in sense, wherein that philosopher, who had been a sculptor in his youth, gives Parrhasius such lessons, as show, that he had a perfect knowledge of all the rules of painting.

It is agreed, that Parrhasius excelled in what regards the characters and passions of the soul, which appeared in one of his pictures, that made abundance of noise, and acquired him great reputation. It was a faithful representation of the PEOPLE OR GENIUS OF ATHENS, which shone with a thousand elegant and surprising beauties, and argued an inexhaustible fund of imagination

³ Plut. de Glor. Athen. p. 346.

⁴ Illusions such as these, in painting, are called by the Italians *inganni*; and, among the moderns, Bassano condescended to practise them very much. He painted a book as if laid upon one of his pictures, and met with what he conceived a flattering reward, when Annibal Caracci was deceived by it, and tried to remove the book. The painter Gennari practised this trick so successfully as to obtain the surname of the Magician: but in fact it argues no great stretch of art to deceive animals at least, as, without demonstrating much judgment in the fine arts, dogs have been often known to recognise their master's picture, and the more readily that the portrait was that sort of daub denominated a staring likeness. Neither can much discrimination, or picture knowledge, be allowed to the feathered tribe, who are so easily scared from a new-sown field by the tattered effigies erected for that purpose.—*Ed.*

⁵ *Hæc vero ita circumscrisit omnia, ut eum legum latorem vocent, quia deorum et heroum effigies, quales ab eo sunt tradite, ceteri, tanquam ita necesse sit, sequuntur.* *Quintil.* l. xii. c. 10.

⁶ Zeuxis atque Parrhasius——plurimum arti addiderunt. Quorum prior luminum umbrarumque invenisse rationem, secundum examinasse subtilibus lineas traditur. *Ibid.*

⁷ Ambire enim debet extremitas ipsa, et sic desinere, ut promittat alia post se, ostendatque etiam quæ occultat.

in the painter. For intending to forget nothing in the character of that state, he represented it, on the one side capricious, irascible, unjust and inconstant; on the other, humane, merciful and compassionate; and with all this, proud, haughty, vainglorious, fierce; and sometimes even base, timorous, and cowardly.¹ This picture was certainly a lively sketch of nature. But in what manner could the pencil describe and group so many different images? There lay the Wonderful of the art. It was undoubtedly an allegorical painting.²

Different authors have also drawn our painter to the life. He was an artist of a vast genius and infinite fertility of invention, but one to whom none ever came near in point of presumption, or rather in that kind of arrogance, which a glory justly acquired, but ill sustained, inspires sometimes in the best artificers.³ He dressed himself in purple, wore a crown of gold; had a very rich cane, gold clasps in his shoes, and magnificent buskins; in short, every thing about him was in the same lofty style. He bestowed upon himself abundantly the finest epithets, and most exalted names, which he was not ashamed to inscribe at the bottom of his pictures; *the delicate, the polite, the elegant Parrhasius, the man who carried the art to its perfection, originally descended from Apollo, and born to paint the gods themselves.* He added, that in regard to his Hercules, *he had represented him exactly, feature for feature, such as he had often appeared to him in his dreams.* With all this show and vanity he gave himself out for a man of virtue, less delicate in this point than Mr. Boileau, who called himself

Ami de la vertu, plutôt que vertueux.
The friend of virtue, rather than virtuous.

The event of his dispute with Timanthes, in the city of Samos, must have humbled him extremely, and not a little mortified his self-love. He that succeeded best in a subject was to have a prize. This subject was an Ajax enraged against the Greeks, for having adjudged the arms of Achilles to Ulysses. Upon this occasion, by the majority of the best judges, Timanthes was declared victor. Parrhasius covered his shame, and comforted himself for his defeat, with a smart saying, which seems to savour a little of rodomontade. *Alas, poor hero! said he, his fate affects me more than my own. He is a second time overcome by one of less merit than himself.*

PAMPHILUS.

Pamphilus was a native of Amphipolis, upon the borders of Macedonia and Thrace. He was the first that united erudition with painting. He confined himself to mathematics, and more especially to arithmetic and geometry; maintaining strongly, that without their aid it was impossible to carry painting to its perfection. It is easy to believe that such a master would not make his art cheap. He took no disciple under ten talents (ten thousand crowns) for so many years, and it was at that price Melanthus and Apelles became his scholars. He obtained, at first at Sicione, and afterwards throughout all Greece, the establishment of a kind of academy, in which the children of free condition, that were inclined to the polite arts, were carefully educated and instructed. And lest painting should come to degenerate, and grow into contempt, he obtained farther from the states of Greece a severe edict to prohibit the use of it to slaves. The excessive price paid by disciples to their masters, and the institution of academies for free persons, with the exclusion of slaves, show how highly this art was esteemed, with what emulation they applied to it, and with what success and expedition it must have attained its perfection. Zeuxis, Parrhasius, Melanthus, and Pamphilus, were cotemporaries, and lived about the 95th Olympiad, A. M. 3604.⁴

1 Pinxit et DEMONA ATTENIENSIMUM, argumento quoque lugenioso, Volebat namque varium, iracundum, injustum, inconstantem; eundem vero exorabilem, clementem, misericordem, excelsum, gloriosum, humilem, ferocem, fugacemque et omnia pariter ostendere. *Plin.*

2 Parrhasius painted, besides this piece, two celebrated groups on different tablets, the one containing the figures of Æneas, Castor and Pollux; the other, Telephus, Achilles, Agamemnon, and Ulysses. Among his reputed productions was a nurse, with an infant in her arms; a priest, attended by a child with a censer; a naval captain, armed with a corslet; Bacchus, with Virtue standing over him; and two excellent figures, one of a man in armour, running, and appearing to labour beneath its weight, and the other, of a person taking off armour, as fatigued with past exertions. His picture of Theseus procured for him the freedom of the city of Athens, and was afterwards placed in the Capitol at Rome. Another of his pieces, Archigalius, was in the possession of the emperor Tiberius; and a grand heroic picture by his hand, representing Meleager, Hercules, and Perseus, was preserved at Rhodes, where it was regarded not only with the admiration due to its excellence, but with superstitious veneration, from a story that the tablet on which it was painted had been three times struck with lightning, without the colours being in the least injured.—*Ed.*

3 *Fecundus artifex, sed quo nemo insolentius et arrogantius sit usus gloria artis.* *Plin.*

4 EUPOMPUS was another painter of this time, who acquired considerable reputation. Before his day, we are informed that there were only two great styles of painting, or rather distinctive names bestowed on the painting of different regions—the Heladian and Asiatic. But Eupompus, being a native of Sicione, so exalted the fame of his country for the art, that the Heladian was divided, and the Sicyonian and the Attic became the terms for the two schools of the artists in Europe, while that of the cities of Asia was denominated by the general term of Ionian. One of the most celebrated works of

TIMANTHES.

Timanthes, according to some, was of Siccyone, and according to others, of Cythnus, one of the Cyclades. His peculiar character was invention.⁵ This part, so rare and difficult, is acquired neither by industry nor the advice and precepts of masters: it is the effect of a happy genius, a lively imagination, and that noble fire which animates painters as well as poets with a kind of enthusiasm.

The Iphigenia of Timanthes, celebrated by so many writers,⁶ was looked upon as a masterpiece of the art in its kind, and occasioned its being said, that his works made those who saw them conceive more than they expressed, and that though art in them rose to its highest degree of perfection, genius still transcended it.⁷ The subject was fine, grand, tender, and entirely proper for painting: but the execution gave it all its value. This piece represented Iphigenia standing before the altar, as a young and innocent princess, upon the point of being sacrificed for the preservation of her country. She was surrounded by several persons, all of them strongly interested in this sacrifice, though in different degrees. The painter had represented the priest Calchas in great affliction, Ulysses much more sad, and Menelaus the victim's uncle, with all the grief it was possible for a countenance to express: Agamemnon, the princess' father, still remained. All the lineaments of sorrow were however exhausted.⁸ Nature was called in to the support of art. It is not natural for a father to see his daughter's throat cut: it sufficed for him to obey the gods who required it, and he was at liberty to abandon himself to all the excess of sorrow. The painter not being able to express that of the father, chose to throw a veil over his face, leaving the spectators to judge of what passed in his heart: *Velavit ejus caput, et suo cuique animo dedit æstimandum.*

this painter was the naked figure of a conqueror in the public games, holding in his hand the branch of a date tree. Eupompus was the master of Pamphilus, who afterwards had the honour of instructing Apelles.—About the same period, Thucyd of Samos gained a high reputation, particularly for his picture of a youthful warrior hastening to battle.—*Ed.*

⁵ Timanthes plurimum adfuit ingenii. *Plin.*

⁶ *Plin.* l. xxxv. *Quinctil.* l. ii. c. 13. *Val. Max.* l. viii. c. 11.

⁷ In omnibus ejus operibus intelligitur plus semper, quam pingitur; et cum ars summa sit, ingenium tamen ultra artem est. *Plin.* l. xxxv. c. 10.

⁸ Cum in Iphigeniæ immolatione pinxisset tristem Colchantem, tristemque Ulyssen addidisset Menelao, quem summam poterat ars efficere mororem; consumptis affectibus, non reperiens quo dignè modo patris vultum posset exprimere, velavit ejus caput, et suo cuique animo dedit æstimandum. *Quinctil.* l. ii. c. 13.

This idea is finely conceived, and does Timanthes great honour. It is not known, however, whether he was the real author of it, and it is probable that the Iphigenia of Euripides supplied him with it. The passage says: *When Agamemnon saw his daughter led into the grove to be sacrificed, he groaned, and turning away his head wept, and covered his face with his robe.*

One of our own illustrious painters, Le Poussin, has happily imitated the same circumstance, in his picture of the death of Germanicus. After having treated the different kinds of affliction of the other persons, as passions capable of being expressed, he places on the side of Germanicus' bed, a woman remarkable for her mien and habit, who hides her face with her hands, whilst her whole attitude expresses the most excessive grief, and clearly intimates that she is the wife of the prince whose death they are lamenting.

I cannot help adding in this place a very curious fact in relation to allegorical painting. A picture, in which a fiction and an emblem are used to express a real action, is so called. The prince of Conde had the history of his father, known in Europe by the name of the Great Conde, painted in his gallery at Chantilly. There was a great inconvenience to get over in the execution of this project. The hero, during his youth, had been engaged in interest with the enemies of the state, and had done great part of his exploits, whilst he did not carry arms for his country. It seemed necessary therefore not to display this part of his warlike actions in the gallery of Chantilly. But, on the other side, some of his actions, as the relief of Cambray, and the retreat before Arras, were so glorious, that it must have been a great mortification to a son so passionate for his father's renown, to have suppressed them in the monument he erected to the memory of that hero. The prince himself discovered an happy evasion: for he was not only the prince, but the man of his time, to whom nature had given the most lively conceptions, and the most shining imaginations. He therefore caused the muse of history to be designed, an allegoric but well known person, holding a book, upon the back of which was written, *Life of the Prince of Conde.* That muse tore leaves out of the book which she threw upon the ground, and on those leaves were inscribed, *Relief of Cambray, relief of Valenciennes, retreat before Arras;* in short, the title of all the great actions of the prince of Conde, during his stay in the Netherlands; all very shining exploits with no other exception than the service in which they were done. The piece unhappily was not executed according to so elegant and simple an idea. The prince, who had conceived so noble a plan, had, upon this occasion, an excess of complaisance, and paying too great a deference to art, permitted the painter to

alter the elegance and simplicity of his thought by figures, which render the painting more uniform, but make it convey nothing more than he had already designed in so sublime a manner. I have extracted this account from the critical reflections upon poetry and painting.

APELLES.

Apelles, whom fame has placed above all other painters, appeared at length in the 112th Olympiad, A. M. 3672. He was the son of Pithius, of the island of Cos,¹ and the disciple of Pamphilus. He is sometimes called an Ephesian, because he settled at Ephesus, where, without doubt, a man of his merit, soon obtained the freedom of the city. He had the glory of contributing more in his own person than all the other painters together, to the perfection of the art, not only by his excellent works, but by his writings, having composed three volumes upon the principal secrets of painting, which subsisted in the time of Pliny, but unfortunately have not come down to us.

His chief excellency lay in the GRACES, that is to say, something free, noble, and at the same time beautiful, which moves the heart, whilst it informs the mind. When he praised and admired the works of others, which he did very willingly; after having owned, that they excelled in all the other parts, he added, that they wanted grace; but that as to himself, that quality had fallen to his share; which praise nobody could dispute with him. A pardonable ingenuity in men of real merit, when not proceeding from pride and arrogance.

The manner in which he came acquainted and contracted a friendship with Protogenes, a celebrated painter of his time, is curious enough, and worth relating. Protogenes lived at Rhodes, known only to Apelles by reputation and the fame of his works. The latter, desiring to be assured of their beauty by his own eyes, made a voyage expressly to Rhodes. When he came to Protogenes' house, he found nobody at home, but an old woman who took care of the place where he worked, and a canvas on the easel, on which there was nothing painted. Upon the old woman's asking his name, I am going to set it down, says he: and taking a pencil with colour, he designed something in a most exquisite taste. Protogenes, on his return, being informed of what had passed by the servant, and considering with admiration what he saw designed, was not long before he guessed the author. *This is Apelles*, cried he; *there is no man in the world capable of so fine and delicate a design besides himself*. Taking another colour, he drew a contour upon the same lines still more correct

and admirable, and bade his housekeeper, if the stranger returned, show him what he had done, and tell him that it was the work of the man he came to inquire for. Apelles came again soon after: but being ashamed to see himself excelled by his rival, he took a third colour, and amongst the strokes already done, introduced others of so sublime and wonderful a nature, as entirely exhausted all that was most refined and exquisite in the art. When Protogenes perceived these last strokes. *I am overcome*, said he, *and fly to embrace my conqueror*. Accordingly he ran to the port, where finding Apelles, they contracted a strict friendship, which continued ever after: a circumstance something extraordinary between persons of the greatest merit in the same way. They agreed between them, in regard to the painting in which they had tried their skill with each other, to leave it to posterity as it was, without touching it any more, rightly foreseeing what really came to pass, that it would one day prove the admiration of the whole world, and particularly of the connoisseurs and masters of the art. But this precious monument of the two greatest painters of antiquity was reduced to ashes, when the house of Augustus, in the Palatium, was first burnt; where it was exposed to the curiosity of spectators, always surprised, in the midst of a multitude of other most exquisite and finished paintings, to find in this only a kind of void space, by so much the more admirable, as it had only the outlines of three designs in it of the most perfect beauty, scarce visible owing to their smallness, and for that reason still the more valuable and the more attractive to the most judicious eyes. It is almost in this sense the passage of Pliny is to be understood, where he says, *arrepto penicillo lineam ex colore durit summa tenuitatis per tabulam*; by *lineam* he does not mean a simple geometrical line, but a stroke of the pencil in an exquisite taste. The other notion is contrary to common sense, says Mr. de Piles, and shocks everybody that has the least idea of painting.

Though Apelles was very exact in his works, he knew how far it was necessary to take pains without tiring his genius, and did not carry his exactitude to the utmost scruple. He said one day of Protogenes, that he confessed that rival might equal, or even excel him in every thing else, but *did not know when to take off the pencil*, (that is to say, to have done;) and that he often spoiled the fine things he did, by endeavouring to give them a higher degree of perfection.² A

² Idem et aliam gloriam usurpavit cum Protogenis opus immensi laboris ac curæ supra modum anxie, mureretur. Dixit enim omnia sibi cum illo paria, aut illi melliora: sed uno se præstare, quod manus ille de tabula non sciret tollere; nec morabili præcepto, nocere sepe nimium diligentiam. Plin.

¹ An isle in the Ægean sea.

reflection worth noting, says Pliny, and which shows that a too scrupulous exactitude often becomes prejudicial.

Apelles did not say this because he approved negligence in those who applied themselves to painting. He was of a quite different opinion, both with regard to himself and others. He passed no day of his life, whatever other affairs he might have to transact, without exercising himself either in crayons, with the pen, or the brush, as well to preserve the freedom and facility of his hand, as to improve his perfection in all the refinements of an art, that has no bounds.

One of his disciples showing him a draught for his opinion of it, and telling him, that he had done it very fast, and in a certain space of time: *I see that very plain*, says he, *without your telling it me, and am surprised that in so short a time you did no more of this kind.*

Another painter showing him the picture of an Helen, which he had drawn with care, and adorned with abundance of jewels, he told him: *My friend, not being able to make her beautiful, you were resolved at least to make her rich.*

If he spoke his own opinion with simplicity, he took that of others in the same manner. His custom was, when he had finished a work, to expose it to the eyes of such as passed by, and to hear what was said of it behind a curtain, with design to correct the faults they observed in it. A shoemaker having perceived something wanting in a sandal, said so freely; and the criticism was just. The next day passing the same way he saw the fault corrected. Proud of the good success of his remark, he thought fit to censure also a leg, to which there was nothing to object: the painter then came from behind the screen, and bade the shoemaker keep to his trade and his sandals: which gave birth to the proverb, *ne sutor ultra crepidam*; that is,

Let not the cobbler go beyond his last.

Apelles took pleasure in doing justice to the merit of great masters, and was not ashamed to prefer them to himself in some qualities. Thus he confessed ingeniously that Amphion excelled him in disposition, and Asclepiodorus in the regularity of design.

We have seen his judgment in favour of Protagoras. Nor did he confine himself to mere words. That excellent painter was in no great esteem with his own country. Whilst Apelles was with him at Rhodes, he asked him what he would take for his works when finished, and the other having set a very moderate price upon them: *and for me*, replied Apelles, *I offer you fifty talents³ for each of them, and will take them*

all at that price; adding, that he should easily get them off, and would sell them all as his own.

This offer, which he made in earnest, opened the eyes of the Rhodians to the merit of their painter; who on his side made the best of it, and would not sell any more of his pictures but at a very considerable price.

His supreme excellency in painting was not the only merit of Apelles. Polite learning, knowledge of the world, and his affable, insinuating, elegant behaviour, made him highly agreeable to Alexander the Great, who did not disdain to go often to the painter's house, as well to enjoy the charms of his conversation, as to see him work, and to be the first witness of the wonders performed by his pencil. This affection for a painter, who was polite, agreeable, and full of wit, is not a matter of wonder. A young monarch easily grows fond of a genius of this kind, who, with the goodness of his heart, unites the beauty of his mind, and the delicacy of his pencil. This sort of familiarity between heroes of different characters, is not uncommon, and does honour to the greatest princes. Alexander had so high an idea of Apelles, that he published an edict to declare, that it was his will that no other person should paint his portrait; and by the same edict granted permission to none but Pyrgoteles to cut the dies for his medals, and Lysippus to represent him in cast metals.

It happened that one of the principal of Alexander's courtiers being one day with Apelles, whilst he was painting, he vented abundance of injudicious questions and reflections upon painting, as is common with those who talk of what they are ignorant.⁴ Apelles, who had no reason to apprehend any thing from explaining himself freely to the greatest lords, said to him, "Do you see those boys that are grinding my colours? Whilst you were silent they admired you, dazzled with the splendour of the purple and gold with which your habits glitter. But ever since you began to talk of what you don't understand, they have done nothing but laugh." Plutarch relates this.⁵ According to Pliny,⁶ Apelles ventured to reprove Alexander himself in this manner, though in softer terms, advising him only to express himself with more reserve before his workmen: such an ascendant had the witty painter acquired over a prince, who was at that time the terror and admiration of the world, and naturally very warm. Alexander gave him still more extraordinary proofs of his affection and regard.

The simple and open character of Apelles was

⁴ Plut. de amic. et adulat. p. 58.

⁵ This anecdote seems to be told indiscriminately of Zeuxis and Apelles. In applying it to Zeuxis, in a preceding note, we followed Elian, Var. Hist. l. ii. c. 3.—Ed.

⁶ Plin. l. xxxv. c. 10.

³ Fifty thousand crowns. This sum seems exorbitant. It is common enough to meet with errors in ciphers.

not equally agreeable to all the generals of that young monarch. Ptolemy, one of them, to whom Egypt was afterwards allotted, was not of the number of those that affected our painter most; for what reason history does not say. However it was, Apelles having embarked, sometime after the death of Alexander, for a city of Greece, was unfortunately thrown by a tempest upon the coast of Alexandria, where the new king gave him no reception. Besides this mortification, which he expected, there were some persons, that envied him, malicious enough to endeavour to embroil him much more. With this view, they engaged one of the officers of the court to invite him to sup with the king, as from himself; not doubting but such a liberty, which he would seem to take of himself, would draw upon him the indignation of a prince, who did not love him, and knew nothing of this little knavish trick. Accordingly, Apelles went to supper out of deference, and the king highly offended at his presumption, asked him fiercely; which of his officers had invited him to his table? and showing him his usual inviters, he added, that he would know which of them had occasioned him to take such a liberty. The painter, without any emotion, extricated himself, from this difficulty like a man of wit, and a consummate designer. He immediately took a piece of charcoal out of a chafingdish, in the room, and with three or four strokes upon the wall, sketched the person that had invited him, to the great astonishment of Ptolemy, who from the first lines knew the face of the impostor. This adventure reconciled him with the king of Egypt, who afterwards loaded him with wealth and honours.

But this did not deliver him from envy, which only became the more violent against him. He was accused, some time after, before that prince, of having entered with Theodotus into the conspiracy formed against him in the city of Tyre.¹ The accuser was another painter of reputation, named Antiphilus. There was not the least probability in the charge. Apelles had not been at Tyre; had never seen Theodotus; and was neither of a character nor profession to be concerned in such affairs: the accuser, who was also a painter, though very inferior to Apelles in merit and reputation, might, without injury, be suspected of jealousy in point of art. But the prince, without hearing or examining any thing, as is too common, taking it for granted that Apelles was criminal, reproached him warmly with his ingratitude, and badness of heart; and he would have been carried to execution, but for the voluntary confession of one of the accomplices; who, touched with

compassion upon seeing an innocent man upon the point of being put to death, confessed his own guilt, and declared that Apelles had no share in the conspiracy. The king, ashamed of having given ear to calumny so hastily, re-instated him in his friendship, gave him an hundred talents,² to make him amends for the wrong he had done him, with Antiphilus to be his slave.

Apelles, on his return to Ephesus, revenged himself upon all his enemies by an excellent picture of *Calumny*, disposed in this manner. Upon the right of the piece sat a man of considerable authority with great ears, not unlike those of Midas, holding out his hand to *Calumny*, to invite her to approach him. On each side of him stood a woman, one of whom represented *Ignorance*, and the other *Suspicion*.³ *Calumny* seems to advance in the form of a woman of exquisite beauty. There is however to be discerned in her aspect and mien an air of violence and fierceness, like one actuated by anger and fury. In one hand, she holds a torch to kindle the fire of discord and division; and with the other she drags a young man by the hair, holding up his hands to heaven, and imploring the assistance of the gods. Before her goes a man with a pale face, a withered lean body, and piercing eyes, who seems to lead the band: this was *Envy*.⁴ *Calumny* is attended by two other women, who excite, animate, and busy themselves about her, to exalt her charms and adjust her attire. By their wary and composed air these are easily conjectured to be *Fraud* and *Treachery*. At a distance behind all the rest follows *Repentance*, clothed in a black torn habit, who looking back with abundance of confusion and tears, sees afar off *Truth* advancing surrounded with light. Such was the useful and ingenious revenge of this great man. I do not believe it would have been safe for him, during his stay in Egypt, to have drawn, or at least exposed, such a painting. Those great ears, that hand extended to invite the approach of *Calumny*, and the like strokes, do no honour to the principal character, and express a prince suspicious, credulous, open to fraud, who seems to invite accusers.

Pliny makes a long enumeration of the paintings of Apelles. That of Antigonus is one of the most famous.⁵ This prince had but one eye, wherefore he drew him turning sideways, to hide that deformity.

He drew a great many pictures of Alexander,

² An hundred thousand crowns.

³ Ἰδέα καὶ Δόξα.

⁴ Envy, in the Greek, is masculine: ὀφθαλμός.

¹ Lucian de Calum. p. 563—565. Lucian is taxed with a very gross anachronism in regard to this fact.

⁵ Habet in pictura speciem tota facies. Apelles tamen imaginem Antigonis laterem tantum altero oculo, dicit, ut amissa oculi deformitas lateret. *Quintil.* l. ii. c. 13.

one of which was looked upon as the most finished of his works. He was represented in it with thunder in his hand. This picture was done for the temple of Diana at Ephesus. The hero's hand with the thunder in it, says Pliny, who had seen it, seems actually projected from the piece. And that prince himself said, that he reckoned two Alexanders, the one of Philip, who was invincible; the other of Apelles, that was inimitable.

Pliny mentions one of his paintings, which must have been of singular beauty. He made it for a public dispute between the painters: the subject given them to work upon was a mare. Perceiving that intrigue was upon the point of adjudging the prize to one of his rivals, he appealed from the judgment of men to that of mute animals, more just than men.⁶ He caused the pictures of the other painters to be set before horses brought thither for that purpose; they continued without motion to all the other pieces, and did not begin to neigh till that of Apelles appeared.

His Venus, called *Anadyomene*, that is to say, rising from the sea, was his masterpiece. Pliny says, that this piece was celebrated by the verses of the greatest poets, and that if the painting was excelled by the poetry, it was also made illustrious by it.⁷ Apelles had made another at Cos, his native country, which in his own opinion, and that of all judges, would have excelled the first; but invidious death put a stop to the work when half executed.⁸ Nobody afterwards would presume to put pencil to it. It is not known, whether it was this second Venus or the first, that Augustus bought of the people of Cos, by discharging them of the tribute of an hundred talents⁹ laid on them by the Roman republic. If it were the second, as is very likely, it had as bad a fate, and still worse than the first. In the time of Augustus, the damp had begun to spoil the lower part of it. Inquiry was made by that prince's order for somebody to retouch it; but there were none bold enough to undertake it, which augmented the glory of the Greek painter, and the reputation of the work itself.¹⁰ This fine Venus, which no one dared to retouch out of veneration and awe, was insulted by the worms, that got into the wood and devoured it. Nero, who reigned then, caused another to be set up in its place, done by *Dorotheus*, a painter of little note. Pliny observes to the reader, that all these won-

derful paintings, which were the admiration of all mankind, were painted only with the four primitive colours, of which we have spoke.

Apelles brought up several disciples, to whom his inventions were of great advantage: but, says Pliny, he had one secret which nobody could ever discover, and that was the composition of a certain varnish, which he applied to his paintings, to preserve them during a long series of ages, in all their freshness and spirit. There were three advantages in the use of this varnish: 1. It gave a lustre to every kind of colour, and made them more mellow, smooth, and tender: which is now the effect of oil. 2. It preserved his works from dirt and dust. 3. It helped the sight of the spectator which is apt to dazzle, in softening the strength of the most lively colours, by the interposition of this varnish, which served instead of glasses to his works.¹¹

ARISTIDES.

One of the most famous cotemporaries of Apelles was Aristides the Theban. He did not indeed possess the elegance and graces in so high a degree as Apelles: but was the first, that by genius and application established unerring rules for expressing the soul, that is to say, the inmost workings of the mind.¹² He excelled as well in the strong and vehement, as the soft and tender passions: but his colouring had something harsh and severe in it.

The admirable piece was his, (still in Pliny's words) in which, in the storming of a town, a MOTHER is represented expiring by a wound she has received in her bosom, and an INFANT creeping to suck at her breast.¹³ In the visage of this woman, though dying, there appears the warmest sentiments, and the most passionate solicitude of the maternal tenderness. She seems to be sensible of her child's danger, and at the same time to be afraid, that instead of her milk he should find only blood. One would think Pliny had the pencil in his hand, he paints all he describes in such lively colours. Alexander, who was so fond of whatever was fine, was so enamoured of this piece, that he caused it to be taken from Thebes, where it was, and carried to Pella, the place of his birth, at least so reputed.

6 Quo judicio ad mutas quadrupedes provocavit ab hominibus.

7 Versibus Græcis tali opere, dum laudatur, victo, sed illustrato.

8 Strab. l. xiv. p. 657.

9 An hundred thousand crowns.

10 Ipsa injuria c. essit in g'loriam artificis.

11 Ne claritas colorum, oculorum aciem offenderet—et eadem res minis floridis coloribus austeritatem occulte daret. *Pin.*

12 Is omnium primus animum pinxit et sensus omnes expressit. *Pin.*

13 Hujus pictura est, opido capto ad matris morientis & vulnere mammam adrepens infans; intelligiturque sentire malere et timere, ne, emortuo lacte sanguinem lambat.

The same person painted also the battle of the Greeks with the Persians, wherein, within a single frame, he introduced an hundred persons at a thousand drachmas¹ (about twenty-four pounds) each figure, by an agreement made between him and the tyrant Mnason, who reigned at that time at Elatea in Phocis. I have spoken elsewhere of a Bacchus, which was reckoned the masterpiece of Aristides, and was found at Corinth when that city was taken by Mummius.

He was so excellent in expressing the languor of the body or mind, that Attalus, who was a great connoisseur in things of this kind, made no scruple to give an hundred talents² for one of his paintings, wherein only something of this nature was expressed: only riches as immense as those of Attalus, which became a proverb, (*Attalius Conditionibus*) could make so exorbitant a price for a single picture probable.

PROTOGENES.

Protopenes was of the city of Caunus, which depended on the city of Rhodes, and was situated upon the southern coast of the island of that name. He employed himself at first only in painting ships, and lived a great while in extreme poverty. Perhaps that might be of no prejudice to him; for poverty often induces men to take pains, and is the sister, or rather mother of invention and capacity.³ By the works he was employed to do at Athens, he became the admiration of the most discerning people in the world.

The most famous of his paintings was the JALYSON, who was a hunter, and reputed the son or grandson of the Sun, and founder of Rhodes. What was most admired in this piece was the froth at the dog's mouth.⁴ I have related this circumstance at length, in speaking of the siege of Rhodes.

Another very celebrated picture of Protopenes, was the satyr leaning against a pillar. He executed it at the very time Rhodes was besieged: wherefore it was said to have been painted under the sword. At first there was a partridge perched upon the pillar.⁵ But because the people of the place, when it was first exposed, bestowed all their attention and admiration upon the partridge, and said nothing of the satyr, which was much more admirable; and the tame

partridges, brought where it was, called upon the sight of that upon the pillar, as if it had been a real one; the painter, offended at that bad taste, which in his opinion was an injury to his reputation, desired leave of the directors of the temple, in which the painting was consecrated, to retouch his work; which being granted, he struck out the partridge.

He also painted the mother of Aristotle, his good friend. That celebrated philosopher, who during his whole life cultivated the polite arts and sciences, highly esteemed the talents of Protopenes. He even wished, that he had applied them better than in painting hunters or satyrs, or in making portraits. And accordingly he proposed to him, as a subject for his pencil, the battles and conquests of Alexander, as very proper for painting, from the grandeur of ideas, elevation of circumstances, variety of events, and immortality of facts. But a certain peculiar taste, a natural inclination for more calm and grateful subjects, determined him to works of the kind I have mentioned. All that the philosopher could obtain of the painter at last, was the portrait of Alexander, but without a battle. It is dangerous to make excellent artists quit their taste and natural talent.

PAUSIAS.

Pausias was of Sicyone. He distinguished himself particularly by that kind of painting called *Caustick*, from the colours being made to adhere either upon wood or ivory, by the means of fire. Pamphilus was his master in this art, whom he far excelled in it. He was the first that adorned arches and ceilings with paintings of this kind. There were many considerable works of his doing. Pausanias speaks of a DRUNKENNESS, so well painted, says he, that all the features of her ruddy face may be distinguished through a large glass she is swilling.

The courtesan Glycera, of Sicyone also, excelled in the art of making wreaths, and was looked upon to be the inventress of them. Pausias, to please and imitate her, applied himself also in painting flowers.⁶ A fine dispute arose betwixt art and nature, each using their utmost endeavours to carry the prize from their competitor, without its being possible to adjudge the victory to either.

Pausias passed the greater part of his life at Sicyone his country, which was in a manner the nursing mother of painters and painting. It

¹ The text says, ten minæ. The mina is worth an hundred drachmas and the drachma ten sols.

² An hundred thousand crowns.

³ Nescio quomodo bonæ mentis soror est paupertas. Petron.

⁴ Plin. l. xxxv. c. 10. Au. Gell. l. xv. c. 31. Plut. in Demetr. p. 808.

⁵ Strab. l. xiv. p. 652.

⁶ Amavit in juvenia Glyceram municipem suam, inventricem coronarum: certandoque imitatione ejus, ad numerosissimam florum varietatem perduxit artem illam—cum opera ejus picturâ imitaretur, et illa provocans variaret, essetque certamen artis ac nature. Plin. l. xxxv. c. 11. et l. xxi. c. 3.

is true, that this city being so much indebted in the latter times, that all the public and private paintings were pledged for large sums of money, M. Scaurus, Sylla's son-in-law by his mother Metella, with design to immortalize his edileship, paid all the creditors, and took out of their hands all the paintings of the most famous masters, and amongst the rest those of Pausias, carried them to Rome, and set them up in the famous theatre, which he caused to be erected to the height of three stories, all supported by magnificent pillars of thirty feet high, to the number of three hundred and sixty, and embellished with statues of marble and bronze, and with antique pieces of the greatest painters. This theatre was to continue only during the celebration of the games. Pliny says of this edileship, that it completed the subversion of the manners of the Roman citizens. *Cujus (M. Scauri) nescio an Edilitas maxime prostraverit mores civiles*; and he goes so far as to add, that it did more prejudice to the republic than the bloody proscription of his father-in-law Sylla, that cut off so many thousand Roman citizens.

Nicias of Athens distinguished himself very much amongst the painters. There were abundance of his pictures in exceeding estimation; amongst others, that wherein he had drawn Ulysses's descent into hell, called *necyia*. Attalus, or rather, according to Plutarch, Ptolomy, offered him for this picture sixty talents, (sixty thousand crowns) which seems almost incredible: but he refused them, and made it a present to his country. He laboured upon this piece with such application, that he often forgot the time of the day, and would ask his servant, *Have I dined?* When Praxiteles was asked upon which of his works of marble he set the highest value; he answered, *That to which Nicias has set his hand.*⁷ He meant by that the excellent varnish added by that painter to his marble statues, which exalted their beauty.

I shall not mention abundance of other great painters, not so well known, nor so illustrious as those I have spoken of, who did so much honour to Greece. It is very unfortunate that none of their works have come down to us, and that we are not capable of judging of their merit by our own eyes. We have it in our power to compare the antique sculpture of the Greeks with our own, because we are certain that we still have masterpieces of it, that is to say, the finest works of that kind antiquity produced. The Romans, in the age of their greatest splendour, which was that of Augustus, disputed

with the Greeks only ability in the art of government. They acknowledged them their masters in all others, and expressly in that of sculpture.

*Excudent alii spirantia mollius æra
Credo equidem; vivos ducent de marmore vultus.
Tu regere imperio populos, Romane, memento:
Hæ tibi erunt artes. Virg. Æneid, l. vi.*

What I have related of Michael Angelo, who preferred the Cupid of Praxiteles so much to his own, is an evident proof, that the modern can no more than the ancient Rome, dispute sculpture with the Greeks.

We cannot judge in the same manner of the excellency of the ancient painters. That question is not to be decided from mere relations. To understand that, it were necessary to have their pieces to compare with each other, and with ours. These we want. There are still some antique Mosaic paintings at Rome; but few done with the pencil, and those in bad condition. Besides which, what remains, and was painted at Rome upon the walls, were not done till long after the death of the celebrated painters of Greece.⁸ It must however be owned, that,

⁸ In the early history of Rome, few works of painting are at all alluded to. The first native artist of Rome, whose name is recorded, was FABIVS, surnamed Pictor, who lived about 300 years B. C. PACUVIVS is mentioned as a skilful painter, whose accomplishments as a man of science and a poet, not only obtained esteem for himself, but went far to gain reputation for the art he practised. He was followed by TURPILIVS, a Roman knight, and, according to Pliny's account, a good painter, remarkable for the peculiarity of painting with his left hand. Near the age of Augustus, who was the first that enriched Rome with any considerable collection of pictures, and had them publicly exhibited, there was a Roman painter of the name of ARELIUS, and after him LUDIUS, a painter of landscapes and sea-ports, who was much employed to ornament the town and country houses of the wealthy Roman citizens with trellis work. AMULUS, painted among other things for Nero, a gigantic portrait of that emperor, 120 feet high. It was done upon cloth, from the difficulty of preparing plaster of sufficient extent of surface, which circumstance is supposed to have given rise to the practice of painting on canvas. Historians mention MARCUS AURELIUS, and LABEO, the proconsul of Narbonne, as having sought amusement in painting. To these may be added PINUS and PRISCUS, which sums up the scanty catalogue of the native painters of ancient Rome.

There cannot be said to have been any Roman style of painting, as nearly all the works done in Rome were the productions of Greek artists, who flocked to Rome after the conquest of Greece and its colonies in Sicily. The number of these was perhaps one powerful means of paralyzing any talent for painting that might have sprung up among the native Romans.

With regard to the specimens of ancient art that have reached our day, it may be remarked, that of moveable pictures, such as the finer works of the Greeks are recorded to have been, no vestige has ever come to light, and probably never can. This circumstance may be regretted, but cannot be wondered at. As to the paintings

⁷ Hic est Nicias, de quo dicebat Praxiteles interrogatus quæ maximè opera sua probaret in marmoribus: Quibus Nicias manum admovisset; tantum circumlitioni ejus tribuebat. *Plin. l. xxxv. c. 11.*

every thing considered, the prejudices are extremely in favour of antiquity, even in regard to painting. In the time of Crassus, whom Cicero introduces as a speaker, in his books *de Oratore*, people could never sufficiently admire the works of the ancient painters, and were soon tired with those of the moderns; because in the former there was a taste of design and expression, that perpetuated the raptures of the connoisseurs, and in the latter scarce any thing to be found, but the variety of the colouring. "I do not know," says Crassus, "how it happens, that things which strike us at first view by their vivacity, and which even give us pleasure by that surprise, almost as soon disgust and satiate us. Let us, for instance, consider our modern paintings. Can any thing be more splendid and lively? What beauty, what variety of colours! How superior are they in this point to those of the ancients! However, all these new pieces, which charm us at first sight, have no long impression; whilst, on the contrary, we are never tired with contemplating the others, notwithstanding all their simplicity, and even the grossness of their colouring." Cicero gives no reason for these effects: but Dionysius Halicarnassensis,³ who lived also in the time of Augustus, does. "The ancients," says he, "were great designers, and understood perfectly all the grace and force of expression, though their colouring was simple and little various. But the modern painters, who excel in colouring and shades, are vastly far from designing so well, and do not treat the passions with the same success." This double testimony shows us, that the ancients had succeeded no less in painting than in sculpture: and their superiority in the latter nobody ever contested. It appears, at least, without carrying any thing to extremes, that the ancients rose as high in the parts of design, chiaro-oscuro, (*light and shade*) expression and composition, as the most excellent moderns can

have done; but as to colouring, that they were much inferior to the latter.

I cannot conclude what regards painting and sculpture, without deploring the abuse made of it, even by those who have most excelled in it: I speak equally of the ancients and moderns. All the arts in general, but especially the two we are now upon, so estimable in themselves, so worthy of admiration, which produce such amazing effects; that by the strokes of the chisel animate marble and brass; and by the mixture of colours, represent all the objects of nature to the life: these arts, I say, owe a particular homage to virtue; to the honour and advancement of which, the original author and inventor of all arts, that is to say, the Divinity himself, has peculiarly allotted them. This is the use which even the Pagans believed themselves obliged to make of sculpture and painting, by consecrating them to the memory of great men, and the expression of their glorious actions. Fabius, Scipio, and the other illustrious persons of Rome, confessed, that upon seeing the images of their predecessors, they found themselves animated to virtue in an extraordinary manner.⁴ It was not the wax of which those figures were formed, nor the figures themselves, that produced such strong impressions in their minds; but the sight of the great men, and the great actions of which they renewed and perpetuated the remembrance, and inspired at the same time an ardent desire to imitate them. Polybius⁴ observes, that these images, that is to say, the busts of wax, which were exposed on the days of solemnity in the halls of the Roman magistrates, and were carried with pomp at their funerals, kindled an incredible ardour in the minds of the young men, as if those great men had quitted their tombs, and returned from the dead, to animate them in person to follow their example.

Agrippa, Augustus's son-in-law, in a magnificent harangue, worthy of the first and greatest citizen of Rome, shows, by several reasons, says Pliny,⁵ how useful it would be to the state to expose publicly the finest pieces of antiquity in every kind, in exciting a noble emulation in the youth: which, no doubt, adds he, would be much better than to banish them

and ornamental decorations that have been discovered at Herculaneum and Pompeia, it would be unjust to receive them as specimens of the ancient state of the art, as they appear to be mere copies by house-painters of existing basso-relievos. Many of them, however, display great ease and accuracy of outline, as well as fine colouring, which, at the time of their being first brought to light, was as fresh as if only a few years had elapsed since they had been painted.—*Ed.*

I Difficile dictu est, quænam causa sit cur ea, quæ maximè sensus nostros impellunt voluptate et specie prima acerrime commovent, ab iis celerimè fastidio quodam et satietate abalienamur. Quânto colorum pulchritudine et varietate floridiora sunt in picturis novis pleraque quam in veteribus! quæ tamen, etiamsi primo aspectu nos ceperunt, diutius non delectant: cùm iidem nos, in antiquis tabulis, illo ipso horrido obsoletoque teneamur. *Cic. de orat. l. iil. n. 58.*

² Dion. Halicarn. Orig. p. 104.

³ Sæpe audivi Q. Maximum, P. Scipionem, præterea civitatis nostræ præclaros viros solitos ita dicere, cùm majorum imagines intuerentur, vehementissimè sibi animam ad virtutem accendi. Scilicet non ceram illam neque figuram, tantam vim in sese habere: sed memoria rerum gestarum eam famam egregiis viris in pectore crescere, neque ipsi sedari, quam virtus eorum famam atque gloriam adæquaverit. *Sallust in præfat. bel. Jugurth.*

⁴ Polyb. l. vi. pp. 495, 496.

⁵ Fxtat ejus (Agrippæ) oratio magnifica, et maximo civium digna, de tabulis omnibus signisque publicandis: quod fieri satius fuisset, quam in villarum exilla pellè. *Plin. l. xxxv. c. 4.*

into the country, to the gardens and other places of pleasure of private men. Accordingly Aristotle says, that sculptors and painters instruct men to form their manners by a much shorter and more effectual method than that of the philosophers; and that there are paintings as capable of making the most vicious reflect within themselves as the finest precepts of morality. St. Gregory Nazianzen relates a story of a courtesan, who, in a place where she did not come to make serious reflections, cast her eyes by accident on the picture of Polemon, a philosopher famous for a change of life, that had something prodigious in it; which occasioned her to reflect seriously, and brought her to a due sense of herself. Cedrenus tells us, that a picture of the last judgment contributed very much to the conversion of a king of the Bulgarians. The sense of seeing is far more lively than that of hearing; and an image, which represents an object in a lively manner, strikes us quite otherwise than a discourse.⁶ St. Gregory of Nyssa declares, that he was touched even to shedding of tears, at the sight of a painting.

This effect of painting is still more instantaneous in regard to bad than good. Virtue is foreign, vice natural to us.⁷ Without the help of guides or examples, (and those we meet with every where) an easy propensity leads us to the latter, or rather hurries us on to it. What then must we expect, when sculpture, with all the delicacy of art, and painting, with all the vivacity of colours, unite to inflame a passion already but too apt to break out, and too ardent of itself? What loose ideas do not those naked parts of young persons suggest to the imagination, which sculptors and painters so commonly take the liberty to exhibit? They may do honour to the art, but never to the artists.⁸ Without speaking of christianity in this respect, which abhors all licentious sculptures and paintings, the sages of the Pagan world, blind as they were, condemn them almost with equal severity. Aristotle in his books *De republica*, recommends it to magistrates, as one of the most essential parts of their duty, to be attentive

in preventing statues and paintings of this kind from appearing in cities, as they are capable of teaching vice, and corrupting all the youth of a state.⁹ Seneca degrades painting and sculpture, and denies them the name of liberal arts, whenever they tend to promote vice.¹⁰

Pliny the naturalist, all enthusiasm as he is, for the beauty of the antique works, treats as dishonourable and criminal the behaviour of a painter in this point, who was otherwise very famous: *Fuit Arcilius Roma celebris, nisi FLAGITIO insigni corrupisset artem.* Plin. l. xxxv. c. 10. He expresses a just indignation against the sculptors, who carved obscene images upon cups and goblets, that people might not drink, in some measure, without obscenity; as if, says he, drunkenness did not sufficiently induce debauchery, and it were necessary to excite it by new attractions. *Vasa adulteriis calata, quasi per se parum doceat libidinem temulentia—Ita vina ex libidine hauriuntur, atque etiam premio invitatur ebrietas.*¹¹ The very poets themselves declare warmly against this indecency. Propertius¹² wonders, that temples are erected in public to chastity, whilst immodest pictures are tolerated in private houses, which cannot but corrupt the imaginations of young virgins; that under the allurements of objects grateful to the eye, convey a mortal poison to the heart, and seem to give public lessons of impurity. He concludes with saying, that those indecent figures were unknown to our ancestors; the walls of their apartments were not painted by obscene hands, to place vice in honour; nor exhibit it as a spectacle for admiration. The passage is too fine not to be inserted here at large.

Templa Pudicitie quid opus statuisse puellis,
Sic culvis nupte quidlibet esse licet?
Que manus obscenas depinxit prima tabellas,
Et posuit castâ turpia visa domo:
Illa puellarum ingenuos corruptit ocellos,
Nequitiaque suæ noluit esse rudes.
Ah! gemat in terris, ista qui protulit: arte
Jurgia sub tacita condita læstia.
Non istis olim variabant tecta figuris:
Tum paries nullo crimine pictuærat.

Whence rise these fanes to virgin modesty,
If every wife to every thing is free?
Who first obscenity in colours drew,
In the chaste house who plac'd it first to view,
Defil'd the harmless maid's ingenious eyes,
And would not leave her ignorant of vice.
Wo to the man! whose vicious pencil taught
In grateful tints to urge a guilty thought:
Our fathers' homes ne'er own'd these noxious arts;
No crimes were painted on their walls or hearts.

6 Segnius irritant animos demissa per aures,
Quam quæ sunt oculis subjecta fidelibus.—*Hor.*

Things by the ear a dull impression find,
To those the faithful eye presents the mind.

Sic intimos penetrat sensus (pictura) ut vim dicendi nonnunquam superare videatur. *Quintil.*

7 Ad deteriora faciles sumus; quia nec dux potest, nec comes deesse; et res etiam ipsa scire duce, sine comite proderit: non pronum est tantum ad vitia, sed præcepta [liter.] *Senec. Epist. 97*

8 Non hic per nudam pectorum corporum pulchritudinem turpis prostat historia, quæ, sicut ornat artem, sic devenit artificem. *Sidon. Apollin. l. xi. Ep. 2.*

9 Peccare docentes historias monet. *Hor.*

10 Non enim adducor ut in numerum liberalium artium pictores recipiam, non magis quam statuarios aut maritimos, aut ceteros luxuriam ministrans. *Senec. Ep. 68.*

11 *Id. l. xiv. c. 22.*

12 *Propert. l. ii. Eleg. 5.*

We have seen a city, that had the choice of two statues of Venus, both done by Praxiteles, (that is saying every thing,) the one covered, and the other naked, prefer the former, though

much the less esteemed, because more conformable to modesty and chastity. Can any thing be added to such an example? What a reproach were it to us, if we were ashamed to follow it!

OF MUSIC.

THE Music of the ancients was a science of far greater extent than is generally imagined. Besides the composition of musical airs, and the execution of those airs with voices and instruments, to which ours is confined, the ancient music included the art of poetry, which taught the rules for making verses of all kinds, as well as to set those susceptible of them to notes; the art of *Saltation*, dancing or gesture, which taught the step and attitude, either of the dance properly so called, or the usual manner of walking, and the gesture proper to be used in declaiming, contained also the art of composing and writing notes to the simple declamation; to direct as well the tone of the voice by those notes, as the degree and motions of gesture; an art very much in use with the ancients, but absolutely unknown to us. All these different parts, which have actually a natural relation to each other, composed originally one and the same art, exercised by the same artists; though they divided in process of time, especially poetry, which became an order by itself. I shall briefly treat all these parts, except that which relates to versification, which will have its place elsewhere; and shall begin with music properly so called, and such as it is known amongst us.

ARTICLE I.

Of Music properly so called.

Music is an art, which teaches the properties of sounds capable of producing melody and harmony.

SECT. I.

Origin and wonderful effects of Music.

Some authors pretend, that the birds learned men to sing, in suggesting, by their various notes and warbling, how capable the different modulations and tones of the voice are of pleasing the ear: but man had a more excellent master,

to whom alone he ought to direct his gratitude. The invention of music, and of the instruments in which a principal part of it consists, is a present from God, as well as the invention of the other arts. It adds to the simple gift of speech, which of itself is so highly valuable, something more lively, more animated, and more proper to give utterance to the sentiments of the soul. When it is penetrated and fired with some object that strongly possesses it, the usual language does not suffice for its transports. It springs forth in a manner out of itself, it abandons itself to the emotions that agitate it, it invigorates and redoubles the tone of the voice, and repeats its words at different pauses; and not contented with all these efforts, calls in instruments to its aid, which seem to give it ease by lending sounds a variety, extent, and continuation, which the human voice could not have. This gave birth to music, made it so affecting and estimable, and shows at the same time, that, properly speaking, its right use is in religion solely, to which alone it belongs to impart to the soul the lively sentiments which transport and ravish it, which exalt its gratitude and love, which are suited to its admiration and ecstasies, and which make it experience it to be delightful to sing praise, that in this manner it may express its joy and happiness, as David did in all his divine songs, which he employs solely in adoring, praising, giving thanks, and singing the greatness of God, and proclaiming the wonders of his power.

Such was the first use men made of music, simple, natural, and without art or refinement, in those times of innocence, and in the infancy of the world; and without doubt the family of Seth, with whom the true worship was deposited, preserved it in all its purity. But secular persons, more enslaved to sense and passion, and more intent upon softening the pains of this life, upon rendering their exile agreeable, and alleviating their distresses, abandoned themselves more readily to the charms of music, and were more industrious to improve it, to reduce it into

an art, to establish their observations upon certain rules, and to support, strengthen, and diversify it by the help of instruments. The scripture¹ accordingly places this kind of music in the family of Cain, which was that of the outcasts, and makes Jubal, one of the descendants of that chief of the unrighteous, the author of it. And we see in effect, that music is generally devoted to the objects of the passions. It serves to adorn, augment, and render them more affecting; to make them penetrate the very soul by additional charms; to render it the captive of the senses; to make it dwell wholly in the ears; to inspire it with a new propensity, to seek its consolation from without; and to impart to it a new aversion for useful reflections and attention to truth. The abuse of music, almost as ancient as its invention, has occasioned Jubal to have more imitators than David. But this ought not to cast any reproach upon music itself. For, as Plutarch observes² upon this subject, few or no persons of reason will impute to the sciences themselves the abuse some people make of them: which is solely to be ascribed to the disposition to vice of those who profane them.

This exercise has in all times been the delight of all nations, of the most barbarous, as well as of those who valued themselves most upon their civility. And it must be confessed, that the author of nature has implanted in man a taste and secret tendency for song and harmony, which serve to nourish his joy in times of prosperity, to dispel his anguish in affliction, and to comfort him in supporting the pains and fatigues of his labours.³ There is no artificer that has not recourse to this innocent invention; and the slightest air makes him almost forget all his fatigues. The harmonious cadence with which the workmen strike the glowing mass upon the anvil, seems to lessen the weight of their heavy hammers. The very rowers experience a kind of relief in the sort of concert formed by the harmonious and uniform motion of their oars. The ancients successfully employed musical instruments, as is still the custom, to excite martial ardour in the hearts of the soldiery; and Quintilian partly ascribes the reputation of the Roman troops, to the impressions made by the warlike sounds of fifes and trumpets upon the legions.⁴

I have said, that music was in use amongst all nations: but it was the Greeks who placed it in honour, and by the value they set upon it, raised it to a very high degree of perfection. It was a merit with their greatest men to excel in it, and a kind of shame to be obliged to confess their ignorance in it.⁵ No hero ever made Greece more illustrious than Epaminondas: his dancing gracefully, and touching musical instruments with skill, were reckoned amongst his fine qualities. Some years before his time, the refusal of Themistocles, at a feast, to play an air upon the lyre, was made a reproach, and was a kind of dishonour to him. To be ignorant of music, passed in those times for a great defect of education.

It is in consequence of this that the most celebrated philosophers, who have left us treatises upon policy, as Plato and Aristotle, particularly recommended the teaching of music to young persons. Amongst the Greeks it was an essential part of education. Besides which, it has a necessary connexion with that part of Grammar called *Prosody*, which treats upon the length or shortness of syllables in pronunciation, upon the measure of verses, their rhyme and cadence, (*or pauses*;) and principally upon the manner of accenting words: the ancients were assured that it might conduce very much to form the manners of youth, by introducing a kind of harmony into them, which might incline them to whatsoever was laudable and polite; nothing being of greater use, according to Plutarch,⁶ than music to excite persons at all times to virtuous actions, and especially to confront the dangers of war.

Music was far from being much esteemed in the happy times of the (Roman) republic. It passed in those days for a thing of little consequence, as Cornelius Nepos⁷ tells us, where he observes, upon the different taste of nations, in regard to several things. Sallust's reproach⁸ of a Roman lady, that she knew better how to sing and dance, than was consistent with the character of a woman of honour and probity; *saltare et psallere elegantius quam necesse est proba*; suffi-

faciunt? quorum concentus, quanto est vehementior, tanto Romano in bellis gloria ceteris præstat. *Quintil.* l. i. c. 10.

⁵ Summam eruditionem Græci sitam censebant in nervorum vocumque cantibus. Igitur Epaminondas princeps, meo iudicio, Græciæ, fidibus præclarè cecinisse, dicitur: Themistoclesque, aliquot ante annis, cum in epulis recusasset lyram, habitus est indoctior. Ergo in Græciæ musici floruerunt, discabantque id omnes; nec, qui nesciebat, satis excultus doctrinâ putabatur. *Cic. Tusc.* i. n. 4.

In ejus Epaminondæ virtutibus commemorabatur, saltasse eum commodè, scienterque tibis cantasse. *Corn. Nep. in præfat.*

⁶ Plut. de Music. p. 140.

⁷ In præfat.

⁸ In bell. Catilin.

2 D

¹ Gen. iv. 21.

² Plut. de Music.

³ Atque eam (musicam,) natura ipsa videtur ad tolerandos facilius labores velut muneris nobis dedisse. Si quidem et renares cantus horiatur: nec solum in iis operibus in quibus plurimum conatus præcunte aliqua jucunda voce conspirat, sed etiam singulorum fatigata quamlibet se rudi modulatione solatur. *Quintil.* l. i. c. 10.

⁴ Duces maximos et fidibus et tibis cecinisse traditum, et exercitus Lacedæmoniorum musica accensus modulæ. Quid autem aliud in nostris Legionibus cornua ac tubæ,

ciently shows what the Romans thought of music. As to dancing, they had a strange idea of it; and would say, that to practise it, one should either be drunk or mad: *Nemo saltat fere sobrius, nisi forte insanit*.¹ Such was the Roman severity, till their commerce with the Greeks, and still more, their riches and opulence, made them give into excesses, with which the Greeks cannot so much as be reproached.

The ancients attributed wonderful effects to music; either to excite or suppress the passions, or to soften the manners, and humanize nations naturally savage and barbarous. Pythagoras seeing a younger stranger, who was heated with the fumes of wine, and at the same time animated by the sound of a flute played on in the Phrygian measure, upon the point of committing violence in a chaste family, restored the young man's tranquillity and reason, by ordering the female minstrel to change the measure, and to play in more solemn and serious numbers, according to the cadence called after the foot *Spondeæ*.² Galen³ relates something exactly of the same nature of a musician of Miletus, named Damon. He tells us of some young people, that a female performer upon the flute had made frantic, by playing in the Phrygian measure, and whom she brought to their senses again by the advice of this Damon, in changing the music from the Phrygian to the Doric measure. Dion Chrysostome,⁴ and some others, inform us, that the musician Timotheus, playing one day upon the flute before Alexander the Great, in the measure called *Órgos*, which is of the martial kind, that prince immediately ran to his arms. Plutarch⁵ says almost the same thing of Antigenides the flutenist, who at a banquet fired that prince in such a manner, that, rising from the table like one out of his senses, he caught up his arms, and clashing them to the sound of the flute, was almost ready to charge the guests.

Amongst the wonderful effects of music, nothing more affecting perhaps, nor better attested, can be instanced, than what regards the Arcadians. Polybius,⁶ a wise, exact historian, well worthy of entire belief, is my authority. I shall only abridge his narrations and reflections.—The study of music, says he, has its utility with all men, but is absolutely necessary to the Arcadians. This people, in establishing their republic, though otherwise very austere in their manner of life, had so high an opinion of

music, that they not only taught that art to their children, but obliged young people to apply to it till the age of thirty. It is not shameful amongst them to profess themselves ignorant of other arts: but it is highly dishonourable not to have learnt to sing, and not to be able to give proofs of it on occasion. Now, says Polybius, their first legislators seem to me, in making such institutions, not to have designed to introduce luxury and effeminacy, but only to soften the ferocity of the Arcadians, and to divert, by the practice of music, their gloomy and melancholy disposition, undoubtedly occasioned by the coldness of the air, which the Arcadians breathe almost throughout their whole country. But the Cynethians having neglected this aid, of which they had the most need, as they inhabited the rudest and most savage part of Arcadia, both as to the air and climate, at length became so fierce and barbarous, that there was no city in Greece wherein so great and so frequent crimes were committed, as in that of Cynethia. Polybius concludes this account, with observing, that he had insisted the more upon it for two reasons. The first, to prevent any of the Arcadian states, out of the false prejudice that the study of music is only a superfluous amusement amongst them, from neglecting that part of their discipline. The second, to induce the Cynethians to give music the preference to all other sciences, if ever God, (the expression is remarkable) if ever God should inspire them, to apply themselves to arts that humanize a people. For that was the sole means to correct their natural ferocity.

I do not know whether it be possible to find any thing in antiquity which equals the praise Polybius here gives music: and every one knows what kind of personage Polybius was. Let us add here what the two great lights of the ancient philosophy, Plato and Aristotle, say of it, who frequently recommend the study of it, and very much extol its advantages. Can a more authentic and favourable testimony be desired? But that the authority of these great men may not impose upon us, I ought here to mention what kind of music they would be understood to mean. Quintilian,⁷ who had the same thoughts upon this head, will explain their opinion: it is in a chapter, where he had given music the highest praise. "Though the examples I have cited, says he, sufficiently show what species of music I approve, I think myself, however, obliged to declare here, that it is not the same, with which the theatres in these days resound, that by its wanton and effeminate airs, has not a little contributed to extinguish and suppress in us whatever remained of our ancient manly virtue: "*Apertius profutendum puto, non*

1 Cic. in. orat. pro Muren. n. 13.

2 Pythagoram acceptissus, concitatos ad vim pudicæ domui afferendam juvenes, jussa mutare in spondeum modos tibicina, composuisse. Quintil. l. i. c. 10.

3 De placit. Hippoc. et Plat. l. v. c. 6.

4 Orat. i. de regn. init. 5 De fortun. Alex. p. 325.

6 Polyb. l. iv. pp. 280 291

7 Quintil. l. i. c. 10.

hanc a me præcipi, quæ nunc in scenis effeminata, et impudicis modis fracta, non ex parte minima, si quid in nobis virilis roboris manebat, excidit. "When I recommend music therefore, it is that, of which men filled with honour and valour made use, in singing the praises of others like themselves. It is as far from my intent to mean here those dangerous instruments, whose languishing sounds convey softness and impurity into the soul, and which ought to be held in horror by all persons of sense and virtue. I understand that agreeable art of affecting the soul by the powers of harmony, in order either to excite or assuage the passions, according to occasion and reason." It is this sort of music that was in so much esteem with the greatest philosophers and wisest legislators amongst the Greeks, because it civilizes savage minds, softens the roughness and ferocity of dispositions, renders people more capable of discipline, makes society more grateful and joyous, and causes those vices to be regarded with horror, which incline men to inhumanity, cruelty, and violence.

Music is not without its advantages to the body, and conduces to the cure of certain distempers. What is related of the wonderful effects of music upon such as have been bit by the Tarantula, would appear incredible, if not supported by authorities, to which we cannot, with reason, refuse our belief. The Tarantula is a large spider with eight eyes and as many legs.⁹ It is not only to be found about Tarento, or in Puglia, but in several other parts of Italy, and in the island of Corsica. Soon after a man is bit by a Tarantula, the part affected feels a very severe pain, succeeded in a few hours by a numbness. He is next seized with a profound melancholy, can scarce breathe; his pulse grows faint, his sight is interrupted and suspended, till at last he loses all sense and motion, and dies, unless assisted in time. Physicians use several remedies for the cure of this illness, which would be useless, if music did not come in to their aid. When the person bit is without sense and motion, a performer upon musical instruments tries different airs; and when he hits upon that, which in its tones and modulation suits the patient, he begins to stir a little; at first he moves his fingers to the time, then his arms and legs, and by little and little his whole body; at last he gets up and dances, continually increasing his activity and force. Some of these will dance six hours without resting. After this they are put to bed, and when it is supposed that they have sufficiently recovered their first dance, they are brought out of bed by the same tune to begin again. This exercise continues several days, about six or seven at most, till the patient finds himself tired, and incapable to

dance any longer, which denotes his being cured. For as long as the poison operates upon him he would dance, if he were suffered, without ceasing, and die by exhausting his spirits. The patient that begins to perceive himself weary, recovers his understanding and senses by degrees, and comes to himself, as if he waked out of a deep sleep, without remembering what had past during his disorder, not even his dancing. This is a very extraordinary case, but absolutely true; of which I must leave it to physicians to explain the cause.

SECT. II.

Inventors and improvers of music, and musical instruments.

The profane historians ascribe the discovery of the first rules of music to their fabulous Mercury, others to Apollo, and some to Jupiter himself. They undoubtedly intended thereby to insinuate, that so useful an invention ought to be attributed only to the gods, and that it was an error to do any man whatsoever the honour of it.

Plutarch's treatise upon music, explained and set in a true light by the learned remarks of Mr. Burette, will supply me with a great part of what I shall relate of the history of those, who are said to have contributed most to the improvement of this art. I shall content myself with simply pointing out the most ancient, who are almost known only in fabulous history without confining myself to the order of time.

AMPHION.

Amphion is held by some to be the inventor of the *Cithara*, or lyre;⁹ for these two instruments were very little different, as I shall show in the sequel, and are often confounded with each other by authors. It is conjectured, that the fable of Thebes being built by the sound of Amphion's lyre is later than Homer's time, who does not mention it, and would not have failed to have adorned his poems with it, had he known it.

The cotemporaries of Amphion were *Linus*, *Anthes*, *Pierius*, and *Phylammon*. The last was father of the famous *Thamyris*, who had the finest voice of his time, and was the rival of the muses themselves, but who having been abandoned to the vengeance of those goddesses, lost his sight, voice, understanding, and even the use of his lyre.

⁹ I shall call this instrument so, as often as I shall have occasion to speak of it: because our *Guitar* or *Lute*, which derives its name from it, is a quite different kind of instrument.

ORPHEUS.

The reputation of Orpheus flourished from the expedition of the Argonauts, of which number he was; that is to say, before the Trojan war. Linus was his master in music, as he was also of Hercules. Orpheus' history is known by all the world.

HYAGNIS.

Hyagnis is said to have been the first player upon the flute. He was the father of Marsyas, to whom the invention of the flute is ascribed. The latter ventured to challenge Apollo, who only came off victor in this dispute, by joining his voice with the sound of his lyre. The vanquished was dead alive.

OLYMPIUS.

There were two of this name, both famous players upon the flute. The most ancient, who was by birth a Mysian, lived before the Trojan war. He was the disciple of Marsyas, and excelled in the art of playing upon string-instruments. The second Olympius was a Phrygian, and flourished in the time of Midas.

DEMODOCUS. PHEMIUS.

Homer praises these two musicians in several parts of the *Odyssey*. Demodocus had composed two poems: the one upon the taking of Troy, the other upon the nuptials of Venus and Vulcan. Homer makes them both sing in the palace of Alcinous king of the Phæaciens, in the presence of Ulysses. He speaks of Phemius as of a singer, inspired by the gods themselves. It is he, who by the singing of his poetry set to music, and accompanied with the sounds of his lyre, enlivens the banquets, in which the suitors of Penelope pass whole days. The author of the life of Homer, ascribed to Herodotus, affirms, that Phemius settled at Smyrna; that he taught youth grammar and music, and married Critheis there, whose illegitimate son Homer was. He tells us, Homer was born before this marriage, and was educated with great care by his father-in-law, after he had adopted him.

TERPANDER.

Authors do not agree with each other concerning Terpander's country, nor the time in which he lived. Eusebius places it in the 33d Olympiad. This epocha ought to be of later date, if it be true, that this poet and musician was the first who obtained the prize in the Carnian games, which were not instituted at Lacedæmon till the 36th Olympiad. Besides this victory,

which did great honour to Terpander's ability in musical poetry, he signalized himself by this art upon several other very important occasions. Much is said of the sedition which he had the address to appease at Lacedæmon by his melodious songs, accompanied with the sounds of his cithara. He also carried the prize four times successively at the Pythian games.

It appears that the elder Olympius and Terpander, having found the lyre in their youth only with four strings, they used it as it was, and distinguished themselves by their admirable execution upon it. In process of time, to improve that instrument, they both made additions to it, especially Terpander, who made its strings amount to seven. This alteration very much displeased the Lacedæmonians, amongst whom it was expressly forbid to change or innovate any thing in the ancient music. Plutarch tells us, that Terpander had a fine laid on him by the Ephori, for having added a single string to the usual number of the lyre; and had his own hung up by a nail for an example. From whence it appears, that the lyre of those times was already strung with six cords.

From what Plutarch says, it appears that Terpander at first composed lyric poems in a certain measure, proper to be sung, and accompanied with the cithara. He afterwards set these poems to such music as might best suit the cithara, which at that time repeated exactly the same sounds as were sung by the musician. In fine, Terpander put the notes of this music over the verses of the songs composed by him, and sometimes did the same upon Homer's poems: after which, he was able to perform them himself, or cause others to do so, in the public games.

Prizes of poetry and music, which were seldom or ever separate, were proposed in the four great games of Greece, especially in the Pythian, of which they made the greatest and most considerable part. The same thing was also practised in several other cities of the same country, where the like games were celebrated with great solemnity, and a vast concourse of spectators.

PHRYNIS.

Phrynis was of Mitylene, the capital of the Island of Lesbos. He was the scholar of Aristoclitus for the harp, and could not fall into better hands; that master being one of Terpander's descendants. He is said to have been the first who obtained the prize of this instrument in the games of the Panathenæa, celebrated at Athens the fourth year of the 80th Olympiad. He had not the same success when he disputed that prize with the musician Timotheus.

Phrynis may be considered as the author of

the first alterations made in the ancient music, with regard to the cithara. These changes consisted, in the first place, in the addition of two new strings to the seven, which composed that instrument before him; in the second place, in the compass and modulation, which had no longer the noble and manly simplicity of the ancient music. Aristophanes reproaches him with it in his comedy of *the Clouds*, wherein Justice speaks in these terms of the ancient education of youth. They went together to the house of the player upon the Cithara—where they learnt the hymn of the dreadful Pallas, or some other song, which they sung according to the harmony delivered down to them from their ancestors. If any of them ventured to sing in a buffoon manner, or to introduce inflections of voice, like those which prevail in these days in the airs of Phrynis, he was punished severely.

Phrynis having presented himself in some public games at Lacedæmon, with his cithara of nine strings, Ecprepes, one of the Ephori, would have two of them cut away, and suffered him only to choose whether they should be the two highest or the two lowest. Timotheus, some short time after, being present upon the same occasion at the Carnian games, the Ephori acted in the same manner with regard to him.

TIMOTHEUS.

Timotheus, one of the most celebrated musician poets, was born at Miletus, an Ionian city of Caria, in the third year of the 93d Olympiad. He flourished at the same time with Euripides and Philip of Macedon, and excelled in lyric and dithyrambic poetry. He applied himself particularly to music and playing on the cithara. His first endeavours were not successful, and he was hissed by the whole people. So bad a reception might have discouraged him for ever; and he actually intended to have entirely renounced an art, for which he did seem intended by nature. Euripides undeceived him in that mistake, and gave him new courage, by making him hope extraordinary success for the future. Plutarch, in relating this fact, to which he adds the examples of Cimon, Themistocles, and Demosthenes, who were reassured by counsels of a like nature, observes, with reason, that it is doing the public great service, to encourage young persons in this manner, who have a fund of genius and fine talents; and to prevent their being disgusted in effect of some faults they may commit in an age subject to error, or of some bad successes, which they may at first experience in the exercise of their profession. Euripides was not deceived in his views and expectation. Timotheus became the most excellent performer upon the cithara of his times. He greatly im-

proved this instrument, according to Pausanias, by adding four strings to it, or, as Suidas tells us, only two, the tenth and eleventh to the ninth, of which the cithara was composed before him. Authors differ extremely upon this point, and often even contradict themselves about it.

This innovation in music had not the general approbation. The Lacedæmonians condemned it by a public decree, which Boetius has preserved. It is wrote in the dialect of the country, in which the prevalent consonant *ῥω* renders the pronunciation very rough; *ῥω δὲ Τιμόθεος Μιλήσιος παραγίνο μνησὲς ἐς τὰς ἀκρίτας πύλας*, &c. and contain in substance: that Timotheus of Miletus having come to their city, had expressed little regard for the ancient music and lyre; that he had multiplied the sounds of the former, and the strings of the latter; that to the ancient, simple, and uniform manner of singing, he had substituted one more complex, wherein he had introduced the chromatic kind; that in his poem upon the delivery of Semele, he had not observed a suitable decency: that to obviate the effects of such innovations, which could not but be attended with consequences pernicious to good manners, the kings and the Ephori had publicly reprimanded Timotheus, and had decreed, that his lyre should be reduced to seven strings as of old, and that all those of a modern invention should be retrenched, &c. This fact is related by Athenæus, with this circumstance, that when the executioner was upon the point of cutting away the new strings conformable to the decree, Timotheus, having perceived in the same place a small statue of Apollo, with as many strings upon the lyre as there were upon his, he showed it to the judges, and was dismissed acquitted.

His reputation drew after him a great number of disciples. It is said, that he took twice the sum off those who came to learn to play upon the flute, (or the cithara) if they had been taught before by another master. His reason was, that when an excellent musician succeeded such as were indifferent, he had double the pains with the scholar: that of making him forget what he had learnt before; the far greater difficulty; and to instruct him anew.

ARCHILOCHUS.

Archilochus rendered himself equally famous for poesy and music. I shall speak of him in the sequel under the title of a poet. In this place I consider him only as a musician; and of all that Plutarch says of him upon that head, I shall only repeat the passage, wherein he ascribes to him the musical execution of Iambic verses, of which some are only spoke whilst the instruments play, and others are sung. This

passage, says Mr. Burette, shows us, that in Iambic poetry there were verses merely *declamatory*, which were only repeated or spoke; and that there were others which were sung. But what this same passage perhaps includes that is not so well known, is, that these *declamatory* Iambics were accompanied with the sound of the cithara, and other instruments of the string kind. It remains to be known in what manner this accompanying of verses spoke was performed. According to all appearance, the player upon the cithara did not only give the poet or actor the general tone of his utterance, and support him in it by the monotony of his playing; but, as the tone of the speaker or declaimer varied according to the different accents, which modified the pronunciation of each word, in order to make this kind of declamation the more distinct, it was necessary that the instrument of music should make all these modifications more sensible, and exactly mark the number or cadence of the poetry, which served it as a guide, and which, in effect of being so accompanied, though not sung, became the more expressive and affecting. In regard to the poetry *sung*, the instrument that accompanied it, conformed its notes servilely to it, and expressed no other sounds, but those of the poet-musician's voice.

ARISTOXENUS.

Aristoxenus was born at Tarentum, a city of Italy. He was the son of the musician Mnæsius. He applied himself equally to music and philosophy. He was first the disciple of his father, then of Xenophilus the Pythagorean, and lastly of Aristotle, under whom he had Theophrastus for the companion of his studies. Aristoxenus lived therefore in the time of Alexander the Great, and his first successors. Of four hundred and fifty-two volumes, which Suidas tells us he composed, only his three books of the *Elements of Harmony* now remain, which is the most ancient treatise of music come down to us.

He warmly attacked Pythagoras' system of music. That philosopher, with the view of establishing an unalterable certitude and constancy in the arts and sciences in general, and in music in particular, endeavoured to withdraw its precepts from the fallacious evidence and report of the senses, to subject them solely to the determinations of reason. Conformably to this design, he was for having the harmonic powers or musical consonance, instead of being subjected to the judgment of the ear, which he looked upon as an arbitrary measure of little certainty, to be regulated solely by the proportions of numbers that are always the same. Aristoxenus maintains, that to mathematical

rules and the ratio of proportions, it was necessary to add the judgment of the ear, to which it principally belonged to determine in what concerned music. He attacked the system of Pythagoras in many other points.

Sotericus, one of the speakers, introduced by Plutarch in his treatise upon music, is convinced, that sensation and reason ought to concur in the judgment past upon the different parts of music; so that the former do not prejudice the latter by too much vivacity, nor be wanting to it upon occasion, through too much weakness. Now the sense in the present question, that is the hearing, necessarily receives three impressions at once: that of the *sound*, that of the *time or measure*, and that of the *letter*; the progression of which conveys the *modulation*, the *rhyme*,¹ and the *words*. And as there can be no adequate perception of these three things separately, and each cannot be followed alone, it seems that only the soul or reason has a right to judge of what this progression or continuity of *sound*, *rhyme*, and *words*, may have of good or bad.

SECT. III.

*The ancient music was simple, grave, and manly.
When and how corrupted.*

As amongst the ancients, music, by its origin and natural destination, was consecrated to the service of the gods, and the regulation of the manners, they gave the preference to that which was most distinguished by its gravity and simplicity. Each of these prevailed long, both in regard to vocal and instrumental music. Olympus, Terpander, and their disciples, at first used few strings on the lyre, and little variety in singing. Notwithstanding which, says Plutarch, all simple as the airs of those two musicians were, which were confined to three or four strings, they were the admiration of all good judges.

The cithara, very simple at first under Terpander, retained this advantage some time. It was not permitted to compose airs for this instrument, nor to change the manner of playing upon it, either as to the harmony, or the cadence; and great care was taken to preserve in the ancient airs their peculiar tone or character; hence they were called *Nomes*, as being intended for laws and models.

The introduction of rhymes in the dithyrambic way; the multiplication of the sounds of the flute by Lasus, as well as of the strings of the lyre by Timotheus; and some other novelties introduced by Phrynis, Menalippides, and

¹ Rhyme, *ῥυθμός*. The time or measure. It may also signify a bar in music.

Philozenus, occasioned a great revolution in the ancient music. The comic poets, especially Pherecrates and Aristophanes, very often complained of it in the strongest terms. We see, in their pieces, Music represented accusing with great warmth and severity those musicians of having entirely depraved and corrupted the art.

Plutarch, in several places of his works, complains also that to the manly, noble, and divine music of the ancients, in which every thing was sublime and majestic, the moderns had substituted that of the theatre, which inspires nothing but vice and licentiousness. Sometimes³ he alleges Plato's authority to prove, that music, the mother of harmony, decency and delight, was not given to man by the gods only to please and tickle the ear, but to reinstate order and harmony in the soul, too often discomposed by error and pleasure. Sometimes³ he admonishes us, that we cannot be too much upon our guard against the dangerous charms of a depraved and licentious music, and points out the means of avoiding such a corruption. He declares here,⁴ that wanton music, dissolute and debauched songs, corrupt the manners; and that the musicians and poets ought to borrow from wise and virtuous persons the subjects of their compositions. In another place⁵ he cites the authority of Pindar, who asserts that God made Cadmus hear a sublime and regular music, very different from those soft, light, effeminate strains, which had taken possession of human ears. And lastly, he explains himself more expressly upon it, in the ninth book of his *Symposiacs*. "The depraved music, which prevails in these days," says he, in injuring all the arts dependant upon it, has hurt none so much as dancing. For this being associated with I know not what trivial and vulgar poetry, after having divorced itself from that of the ancients, which was entirely divine, has usurped our theatres, where it triumphs amidst a ridiculous admiration: and exercising a kind of tyranny, has subjected to itself a species of music of little or no value: but at the same time, it has actually lost the esteem of all those, who, for their genius and wisdom, are considered as divine persons." I leave it to the reader to apply to our times, what Plutarch says of his, in regard to music and the theatre.

It is no wonder that Plutarch complains thus of the depravation, which had universally infected the music of his times, and made it of so little value. Plato, Aristotle, and their disciples, had made the same complaint before him; and that in an age so favourable as theirs to the im-

provement of polite arts, and so productive of great men in every kind. How could it happen, that at a time, when eloquence, poetry, painting, and sculpture, were cultivated with such success, music, for which they had no less attention, declined so much? Its great union with poetry was the principal cause of this, and these two sisters may be said to have had almost the same destiny. At first, each confined to the exact imitation of what was most beautiful in nature, had no other view than to instruct whilst they delighted, and to excite emotions in the soul of equal utility, in the worship of the gods, and the good of society. For this end they employed the most suitable expressions, turns of thought, numbers and cadences. Music particularly, always simple, decent, and sublime, continued within the bounds prescribed her by the great masters, especially the philosophers and legislators, who were most of them poets and musicians. But the theatrical shows; and the worship of certain divinities, of Bacchus amongst the rest, in process of time, very much set aside these wise regulations. They gave birth to dithyrambick poetry, the most licentious of all in its expression, measure, and sentiments. It required a music of the same kind, and in consequence very remote from the noble simplicity of the ancient. The multiplicity of strings, and all that vicious redundancy of sound and levity of ornament, were introduced to an excess, and gave room for the just complaints of all such as excelled, and had the best taste, in this way.

SECT. IV.

*Different kinds and measures of the ancient music.
Manner of writing the notes to songs.*

To speak of the ancient music in general, and to give a slight idea of it, it is proper to observe, that there are three kinds of symphonies; the vocal, the instrumental, and that composed of both. The ancients knew these three kinds of symphonies or concerts.

We must farther remark, that music had at first only three measures, which were a tone higher than one another. The gravest of the three was called the *Doric*; the highest the *Lydian*; and the middle the *Phrygian*: so that the *Doric* and *Lydian* included between them the space of two tones, or of a tercet or third major. By dividing this space into demi-tones, room was made for two other measures, the *Ionian* and *Eolian*; the first of which was inserted between the *Doric* and *Phrygian*; the second between the *Phrygian* and *Lydian*. Other measures were superadded, which took their denominations from the five first, prefixing the preposition *ἐν* above, for those above; and the preposition *ὑπο* below, for those below. The

³ De Superstit. p. 167.

³ Symp. l. 7. p. 704.

⁴ De Audit. Poet. p. 19.

⁵ De Pyth. Orac. p. 397.

Hyperdoric, the *Hyperionic*, &c. The *Hypodoric*, the *Hypoionic*, &c.

In some books of modern singing in churches, and at the end of some breviaries, to these different measures are referred the different tones now used in chanting divine service. The first and second tone belong to the Doric measure; the third and fourth to the Phrygian; and the rest to the Lydian and Mixolydian. The manner of chanting in the church is in the Diatonic kind, which is the deepest, and agrees best with divine worship.

I return to the first division. The vocal symphony necessarily supposes several voices, because one person cannot sing several parts at the same time. When several persons sing in concert together, it is either in unison, which is called *Homophony*; or in the octave, and even the double octave; and this is termed *Antiphony*. It is believed that the ancients used also a third manner, which consisted in singing to a tercet or third. The instrumental symphony, amongst the ancients, had the same differences as the vocal, that is to say, several instruments might play together in the unison, the octave, and the third.

To have two strings of an instrument, of the same substance equally thick, and equally strained, denotes that these accord with each other; all that is necessary is to regulate their lengths by certain proportions of number. For instance, if the two strings be equal in length, they are unisons; if as 1 to 2 they are octaves; if as 2 to 3 they are fifths; as 3 to 4 they are fourths; as 4 to 5 they are third majors, &c.

The ancients, as well as we, had some instruments upon which a single performer could execute a kind of concert. Such were the double flute, and the lyre. The first of these instruments was composed of two flutes, joined in such a manner, that the two pipes had usually but one mouth in common to both. These flutes were either equal or unequal in length or in the diameter of the bore. The equal flutes had the same, the unequal different, sounds, of which one was deep, the other high. The symphony, which the two equal flutes made, was in the unison, when the two hands of the performer stopp'd the same holes of each flute at the same time; or thirds, when he stopp'd different holes of both flutes. The diversity of sounds, resulting from the unequal flutes, could be only of two kinds, according to the flutes being either octaves or thirds: and in both cases the performer stopp'd the same holes of each flute at the same time, and in consequence formed a concert either in the octave or third.

By the lyre is meant here every musical instrument in general, with strings strained over a cavity for sound. The ancients had several instruments of this kind, which differed only in

their form, their size, or the number of their strings; and to which they gave different names, though they often used one for the other. The chief of them were, 1. the *Cithara*, *Kithara*, from which the word Guitar is derived, though applied to a quite different instrument. 2. The *Lyre*, *Λύρα*, otherwise called *χίταρ*, and in Latin *Testudo*, because the bottom resembled the scale of a tortoise, the figure of which animal (as is said) gave the first idea of this instrument. 3. The *Τρίγωνον*, or triangular instrument, the only one that has come down to us under the name of the Harp.

The lyre, as I have said before, varied very much in the number of its strings. That of Olympius and Terpander had at first but three, which those musicians knew how to diversify with so much art, that if we may believe Plutarch, they very much exceeded those who played upon lyres of a greater number. By adding a fourth string to the other three, they made the *Tetrachord*¹ complete; and it was the different manner in which harmony was produced by these four strings, that constituted the three kinds of it, called the *Diatonic*, *Chromatic*, and *Enharmonic*. The *Diatonic* kind appertains to the common and ordinary music. In the *Chromatic*, the music was softened by lowering the sounds half a tone, which was directed by a coloured mark, from whence the Chromatic took its name *χρῶμα*, signifying colour. What is now called B flat, belongs to the Chromatic music. In the *Enharmonic* music, on the contrary, the sounds were raised a demi-tone, which was marked as at present, by a diesis. In the *Diatonic* music, the air or tune could not make its progressions by less intervals than the semi-tones major. The modulation of the *Chromatic* music made use of the semi-tones minor. In the *Enharmonic* music, the progression of the air might be made by quarter-tones. Macrobius, speaking of these three kinds, says, the *Enharmonic* is no longer in use upon account of its difficulty: that the *Chromatic* is no longer esteemed, because that sort of music is too soft and effeminate: and that the *Diatonic* holds the mean between them both. The addition of a fifth string produced the *Pentachord*. The lyre with seven strings, or the *Heptachord*, was more used, and in greater esteem than all others. However, though it included the seven notes of music, the octave was still wanting. Simonides at length added it, according to Pliny, with an eighth string. Long after him, Timotheus the Milesian, who lived in the reign of Philip king

¹ Plut. de Mus. p. 1137.

² A passage in Horace, differently explained by M. Dacier and father Sanadon, has given room for learned dissertations upon the instrument called the *Tetrachord*.

³ Lib. ii. in Somn. Scipion. c. 4.

⁴ Plin. l. vii. c. 56.

of Macedon, about the 108th Olympiad, multiplied, as we have observed, the strings of the lyre, to the number of eleven.⁵ This number was still increased.

The lyre, with three or four strings, was not susceptible of any symphony. Upon the *Pentachord*, two parts might be played by thirds to each other. The more the number of strings increased upon the lyre, the easier it was to compose airs with different parts upon that instrument. The question is to know, whether the ancients improved that advantage. This question, which has been a matter of inquiry for about two ages in regard to the ancient music, and consists in knowing whether the Greeks and Romans were acquainted with that kind of it called *Counterpoint*, or concert in different parts, has occasioned different writings on both sides. The plan of my work dispenses with my entering into an examination of this difficulty, which I confess besides exceeds my capacity.

It is not unnecessary to know in what manner the ancients noted their airs.⁶ With them the general system of music was divided into eighteen sounds, of which each had its particular name. They invented characters to signify each tone: *cuspid, signs*. All these figures were composed of a monogram, formed from the first letter of the particular name of each of the eighteen sounds of the general system. These signs, which served both for vocal and instrumental music, were wrote above the words upon two lines, of which the upper was for the voice, and the lower for the instruments. These lines were not larger than lines of common writing. We have some Greek manuscripts, in which these two species of notes are wrote in the manner I have related. From them the hymns to Calliope, Nemesis, and Apollo,⁷ as well as the strophe of one of Pindar's odes, were taken. Mr. Burette has given us all these fragments, with the ancient and modern notes, in the fifth volume of the *Memoirs of the Academy of Belles Lettres*.

The characters invented by the ancients for writing musical airs, were used till the eleventh century, when Guy d'Arezzo invented the modern manner of writing them with notes placed on different lines, so as to mark the sound by the position of the note. These notes were at first no more than points, in which there was nothing to express the time or duration. But John de Meurs, born at Paris, and who lived in the reign of king John, found out the means of giving these points an unequal value, by the different figures of crotchets, minims, semi-

briefs, quavers, semiquavers, &c. which he invented, and have since been adopted by all the musicians of Europe.

SECT. V.

Whether the modern should be preferred to the ancient music.

The famous dispute on this subject, between many learned men, has been very hotly contested; because it has been held that, if the ancient music was destitute of the *Counterpoint*, or concert in different parts, that defect gives an indisputable right of preference to the modern. Admitting the superiority of the moderns in this particular to be real, which may with great reason always remain doubtful, I am not sure that the consequence is so certain. Might not the ancients, in all other respects, have carried music to a degree of perfection, the moderns have not attained, as well as all the other arts? (I do not say it is so, I speak only of its possibility;) and if so, ought the discovery of the *Counterpoint* to give the latter an absolute preference to the former? The most excellent painters of antiquity, as Apelles, used only four colours in their pieces. This was so far from being a reason with Pliny for diminishing any thing of their merit and reputation, that he admired them the more for it, and that they had excelled all succeeding painters so much, though the latter had employed a great variety of new tints. But to trace this question to the bottom; let us examine, whether the music of later times does actually and indisputably excel that of the ancients; and we shall soon find that this is a question which it is impossible for us to decide. It is not with music as with sculpture. In the latter, the cause may be tried by the evidence of the performances to be produced on both sides. We have statues and reliefs of the ancients, which we can compare with our own; and we have seen Michael Angelo pass sentence in this point, and actually acknowledge the superiority of the ancients. None of their music has come down to us, to make us sensible of its value, and to enable us to judge by our own experience, whether it be as excellent as our own. The wonderful effects, it is said to have produced, do not seem proofs sufficiently decisive. There are still extant treatises on Didacticks, as well Greek as Latin, which may lead us to their theory of this art: but can we conclude any thing very certain from these in regard to their practice of it? Theory may give us some light, some opening; but precepts are exceedingly remote from execution. Would treatises upon poetry alone suffice to inform us, whether the modern ought to be preferred to the ancient poets?

In the uncertainty there will always be with

⁵ Plut. de. Mus. p. 1141.

⁶ Martian Capel. de nupt Philol.

⁷ These hymns were wrote by a poet named Dionysius, little known in other respects.

regard to the matter in question, there is a prejudice very much in favour of the ancients, which ought, in my opinion, to make us suspend our judgment. It is allowed that the Greeks had wonderful talents for all arts; that they cultivated them with extraordinary success, and carried most of them to a surprising degree of perfection. In architecture, sculpture, and painting, nobody disputes their supreme excellency. Now of all these arts, none were so anciently or generally cultivated as music. This was not practised only by a few private persons, who made it their profession, as in the other arts; but by all in general who had any care taken of their education, of which the study of music was an essential part. It was of general use in solemn festivals, sacrifices, and especially at meals, that were almost always attended with concerts, in which their principal joy and refinement consisted. There were public disputes and prizes for such as distinguished themselves most by it. It had a very peculiar share in choruses and tragedies. The magnificence and perfection, to which Athens rose in every thing else that related to the public shews, is known: Can we imagine that city to have neglected only music? Can we believe, that those Attic ears,¹ so refined and exquisite in respect to the sound of words in common discourse, were less so in regard to the concerts of vocal and instrumental music, so much used in their choruses, and in which the most sensible and usual pleasure of Athens consisted? For my part, I cannot help being of opinion, that the Greeks, inclined as they were to diversions, and educated from their earliest youth in a taste for concerts, with all the aids I have mentioned, with that inventive and industrious genius they were known to have for all the arts, must have excelled in music as well as in all other arts. This is the sole conclusion I make from all the reasons I have advanced, without pretending to determine the preference in favour of either the ancients or moderns.

I have not spoken of the perfection to which the Hebrew singers might have attained, in what regards vocal and instrumental music, in order to avoid mingling a species entirely sacred and devoted to religion, with one wholly profane and abandoned to idolatry, and all the excesses consequential of it. We may presume that these singers, to whom the holy scripture seems to ascribe a kind of inspiration and the gift of prophecy,² not to compose prophetic psalms, but to

sing them in a lively and ardent manner, full of zeal and rapture, had carried the science of singing to as great a perfection as was possible. It was, no doubt, a grand, noble, and sublime kind of music, wherein every thing was proportioned to the majesty of its object, the Godhead who, we may add, was its author: for he had vouchsafed to form his ministers and singers himself, and to instruct them in the manner it pleased him to have his praises celebrated.

Nothing is so admirable as the order itself, which God had instituted amongst the Levites for the exercise of this august function. They were four thousand in number, divided into different bodies, of which each had its chief, and the kind, as well as times, stated for the discharge of their respective duties. Two hundred fourscore and eight,³ were appointed to teach the rest to sing and play upon instruments. We see an example of this wonderful order in David's distribution of the parts of the sacred music, when he solemnized the carrying of the ark from the house of Obed-Edom into the citadel of Zion. The whole troop of musicians were divided into three choruses. The first had hollow instruments of brass, that resounded exceedingly, unlike our kettle-drum, only in not being covered with skins, and having their hollow part laid over with double bars, which they struck on different parts of them. These sounds suited very well the sacerdotal trumpets, that preceded them, and were very proper by their lively, strong and broken iterations, to awake the attention of the spectators. The second troop of sacred singers played in the treble, or higher key, on a different instrument. The third chorus consisted of basses, that served to exalt and sustain these trebles, with which they always played in concert (*perhaps in unisons*) because directed by the same master of the singers. It is easy to conceive, that the Levites, so numerous as they were, destined from father to son to this sole exercise, taught by the most skilful masters, and formed by long and continual habit, must have attained great excellency, and at length become consummate in all the beauties and delicacies of an art, in which they passed their whole lives. This was the true intent of music. The most noble use, that men can make of it, is to employ it in rendering the continual homage of praise and adoration to the supreme majesty of God, who has created, and governs the universe, and reserves so sacred an office for his faithful children. *Hymnus omnibus sanctis ejus.*

1 Atticorum aures teretes et religiose. Cic.

2 And Chenaniah, chief of the Levites, was for song (or PROPHECY:) he instructed about the song, because he was skilful. 1 Chron. xv. 22.

David and the captains of the host separated to the service of the sons of Asaph, and of Heman, and of

Jeduthun, who should prophesy with harps, with psalteries, and with cymbals. 1 Chron. xxv. 1.

3 ——— With their brethren that were instructed in the songs of the Lord, even all that were cunning, two hundred fourscore and eight. 1 Chron. xxv. 2.

ARTICLE II.

Of the parts of music peculiar to the ancients.

I shall treat in this second article the other parts of music in use amongst the ancients, but unknown amongst us, and shall confound them often together, because they have a natural connexion, and it would be difficult to separate them without falling into tedious repetitions. I shall make great use of what is said upon these heads, in the critical reflections of the Abbé du Bos, upon poetry and painting.

SECT. I.

Speech upon the stage, or manner of theatrical declamation composed and set to notes.

The ancients composed and wrote with notes the mode of declamation or manner of speaking upon the stage, which however was not singing to music; and it is in this sense we should often understand in the Latin poets the words *cæcere*, *cantus*, and even *carmen*, which do not always signify singing properly so called, but a certain manner of speaking or reading. According to Bryennius, this declaiming or speaking was composed with accents, and in consequence it was necessary, in writing it, to make use of the characters, which expressed those accents. At first they were only three, the acute, the grave, and the circumflex. They afterwards amounted to ten, each marked with a different character. We find their names and figures in the ancient Grammarians. The accent is the certain rule, by which the voice should be raised or depressed in the pronunciation of every syllable. As the manner of sounding these accents was learnt at the same time with reading, there was scarce any body, who did not understand this kind of notes.

Besides the help of accents, the syllables in the Greek and Latin languages had a determinate quantity, that is to say, they were either long or short. The short syllable had only one, and the long, two seconds of time.⁴ This proportion between long and short syllables was as absolute, as that in these days between notes of different length. As two black notes in our music ought to have as much time, as one white one in the music of the ancients, two short syllables had neither more nor less than one long one. Hence, when the Greek or Roman musicians were to compose any thing whatsoever, they had no more to do, in setting the time to it, than to conform to the quantity

of the syllables, upon which they placed each note. I cannot avoid observing here by the way, that it is a pity, the musicians amongst us, who compose hymns and motets, do not understand Latin, and are ignorant of the quantity of words; from whence it often happens, that upon short syllables, over which they ought to run lightly, they insist and dwell a great while, as if they were long ones. This is a considerable fault, and contrary to the most common rules of music.

I have observed, that the modulation of the voice and measure of time in speaking, of the actors upon the stage, was composed and wrote in notes, which determined the tone it was proper to take. Amongst many passages, that demonstrate this, I shall content myself with choosing one from Cicero, where he speaks of Roscius, his cotemporary, and intimate friend. Every body knows, that Roscius became a person of very great consideration, by his singular excellency in his art, and his reputation for probity. The people were so much prejudiced in his favour, that when he did not act so well as usual, they said it was either out of negligence or indisposition. *Noluit, inquit, agere Roscius, aut crudior fuit.*⁵ In fine, the highest degree of praise, that they gave to a man, who excelled in his profession, was to say, he was a Roscius in his way.⁶

Cicero, after having said, that an orator, when he grows old, might soften his manner of speaking, quotes, as a proof and example of it, what Roscius declared; that when he perceived himself grow old, he obliged the instruments to play in a slower time. *Quoniam, quoniam multa ad oratoris similitudinem ab uno Artifice sumimus, solet idem Roscius dicere, se, quo plus sibi ætatis accederet, eo tibicinis cantus & modus remissiores esse facturum.*⁷ Cicero accordingly, in a later work than that I have now cited, makes Atticus say, that actor had abated his declamation, or manner of speaking, by obliging the player on the flute, that accompanied him, to keep a slower time with the sounds of his instrument. *Roscius familiaris tuus, in senectute numeros & cantus remisit, ipsasque tardiores fecerat tibi.*⁸ It is evident, that the singing (for it was often called so) of the dramatic pieces on the stages of the ancients, had neither divisions, recitative, continued quaverings, nor any of the characters of our musical singing: in a word, that this singing was only declaiming, or speaking as with us. This manner of utterance

5 Cic. de Orat. l. i. n. 124.

4 Longam esse duorum temperum, brevem unius, etiam pueri sciunt. *Quincil.* l. ix. c. 4.

6 Jam diu consecutus est ut in quoque arte artificie excelleret, is in suo genere Roscius dicebatur. *De orat.* l. i. n. 130.

7 De Orat. l. i. n. 254.

8 Cic. de Leg. l. i. n. 11

was, however composed, as it was sustained by a continued base, of which the sound was proportioned, in all appearance, to that made by a man, who declaims or pronounces a speech. This may seem to us an absurd and almost incredible practice, but is not therefore the less certain; and in matter of fact, it is useless to object any arguments. We can only speak by conjecture upon the composition which the continued base might play, that accompanied the actor's pronunciation. Perhaps it only played from time to time some long notes, which were heard at the passages, in which it was necessary for the actor to assume such tones, as it was not easy to hit with justness, and thereby did the speaker the same service, as Gracchus received from the player upon the flute, he always had near him, when he harangued, to give him at proper times the tones concerted between them.

SECT. II.

Gesture of the stage composed and set to music.

Music did not only regulate the tone of voice in speaking, but also the gesture of the speaker. This art was called *ἄλκυον* by the Greeks, and *Saltatio* by the Romans. Plato¹ tells us, that this art consisted in the imitation of all the gestures and motions men can make. Hence we must not confine the sense of *Saltatio*, to what our language means by the word *dancing*. This art, as the same author observes, was of great extent. It was designed not only to form the attitudes and motions, which add grace to action, or are necessary in certain artificial dances, attended with variety of steps, but to direct the gesture, as well of the actors upon the stage, as the orators; and even to teach that manner of gesticulation we shall soon treat of, which conveyed meaning without the help of speech.

Quintilian advises the sending of children, only for some time, to the schools where this art of *Saltatio* was taught; but solely to acquire an easy air and graceful action; and not to form themselves upon the gesture of dancing-masters, to which that of orators should be extremely different.² He observes, that this custom was very ancient, and had subsisted to his times without any objection. Macrobius, however, has preserved a fragment of a speech

of the younger Scipio Africanus, wherein that destroyer of Carthage speaks warmly against this custom. "Our youth, says he, go to the schools of the comedians to learn singing,³ an exercise, which our ancestors considered as unworthy of persons of condition. Young persons of both sexes go thither without blushing, where they mingle with a crowd of the most loose and abandoned minstrels."⁴ The authority of so wise a man as Scipio is of great weight on this head, and well deserves serious attention.

Be this as it may, we find, that the ancients took extraordinary pains to cultivate gesture, and both comedians and orators were very careful in this point. We have seen how industriously Demosthenes applied himself to it. Roscius sometimes disputed with Cicero, who best expressed the same thought in several different manners, each in his own art; Roscius by gesture, and Cicero by speech.⁵ Roscius seems to have repeated that only by gesture, which Cicero first composed and uttered; after which judgment was given upon the success of both. Cicero afterwards changed the words or turn of phrase, without enervating the sense of the discourse; and Roscius, in his turn, was to give the sense by other gestures, without injuring his first mute expression by the change of manner.

SECT. III.

Pronunciation and gesture divided upon the stage between two actors.

We shall be less surprised at what I have said concerning Roscius, when we know, that the Romans often divided the theatrical representation between two actors, of whom the one pronounced, whilst the other made gestures. This again is one of the things not easily conceived, so remote is it from our practice, and so extravagant therefore does it appear.

Livy tells us the occasion for this custom. Livius Andronicus,⁶ a celebrated poet, who

3 As comedians are spoken of here, by the word *cantare*, we must understand to speak or declaim after the manner of the theatre.

4 Eunt in ludum histriionum, discunt cantare quod majores nostri ingenuis probro duci voluerunt. Eunt, inquam, in ludum saltatorium inter Cinados, virgines puerique ingenui. *Macrobi. Saturnal.* l. ii. c. 8.

5 Et certe satis constat contendere eum (Ciceronem) cum histrione solitum, utrum ille sapius eandem sententiam variis gestibus efficeret, an ipse per eloquentiam copiam sermone diverso pronuntiaret. *Macrobi. Saturnal.* l. ii. c. 10.

6 Livius—idem scilicet, quod omnes tunc erant suorum carminum actor, dicitur, cum sapius revocatus vocem obtulisset, venia petita puerum ad canendum ante tibicenem cum statulisset, canticum egisse aliquanto magis

1 Plat. de Leg. l. vii. p. 814.

2 Cujus etiam disciplinae usus in nostram usque aetatem sine reprehensione descendit. A me autem non ultra pueriles annos retinebitur, nec in his ipsis diu. Neque enim gestum oratoris componi ad similitudinem saltatoris volo, sed subesse aliquid ex hac exercitatione. *Quintil.* l. i. c. 11.

first gave Rome a regular dramatic piece, in the five hundred and fourteenth year of that city, about an hundred and twenty years after shows of that kind had been introduced there, acted himself in one of his own pieces. It was usual at that time for the dramatic poets to mount the stage, and represent some character. The people, who took the liberty to cause the passage they liked to be repeated, by calling out *bis*, that is to say, *encore*, made Andronicus repeat so long, that he grew hoarse. Not being capable of pronouncing any longer, he prevailed upon the audience to let a slave, placed behind the performer upon the instruments, repeat the verses, whilst Andronicus made the same gestures, as he had done in repeating them himself. It was observed, that his action was at that time much more animated than before, because his whole faculties and attention were employed in the gesticulation, whilst another had the care and trouble of pronouncing the words. From that time, continues Livy, arose the custom of dividing the parts between two actors, and to pronounce, in a manner corresponding to the comedian's gesture. And this custom has prevailed so much, that the comedians themselves pronounce no longer any thing besides the dialogue part. Valerius Maximus relates the same thing, which passages in many other authors confirm. It is therefore certain, that the pronunciation and gesture were often divided between two actors; and that it was by established rules of music they regulated both the sound of their voices, and the motion of their hands and whole bodies.

We should be struck with the ridicule there would be in two persons upon our stage, of whom, one should make gestures without speaking, whilst the other repeated in a pathetic tone without motion. But we should remember, in the first place, that the theatres of the ancients were much more vast than ours; and in the second place, that the actors played in masks, and that in consequence one could not distinguish sensibly at a great distance, whether they spoke or were silent by the moving of the mouth, or the features of the face. They undoubtedly chose a *singer*, (I mean him who pronounced,) whose voice came as near as possible to that of the comedian. This singer was placed in a kind of alcove, towards the bottom of the scene.

But in what manner could the rhythmic

music adapt itself to the same measure and cadence with the comedian that repeated, and him who made gestures? This was one of those things, that St. Augustin says, were known to all who mounted the stage, and for that reason he believed improper for him to explain. It is not easy to conceive what method the ancients used to make both these players act in so perfect a concert, as scarce to be distinguished from one: but the fact is certain. We know that the measure was beat upon the stage, which the actor who spoke, he who made gestures, the chorus, and even the instruments, were to observe as their common rule. Quintilian, after having said, that gesture is as much subservient to measure, as utterance itself, adds, that the actors, who gesticulate, ought to follow the signs given with the foot; that is to say, the time beat, with as much exactitude, as those who execute the modulations; by which he means the actors who pronounce, and the instruments that accompany them.⁷ Near the actor who represented, a man was placed with iron shoes, who stamped upon the stage.⁸ It is natural to suppose, that this man's business was to beat the time with his foot, the sound of which would be heard by all whose business it was to observe it.

The extreme delicacy of the Romans, (and as much may be said of the Greeks) in whatever concerned the theatre, and the enormous expenses they were at in representations of this kind, gives us reason to believe, that they carried all parts of them to a very great perfection; and in consequence that the distribution of single parts between two actors, of which one spoke, and the other made gestures, had nothing in it, that was not highly agreeable to the spectators. A comedian at Rome, who made a gesture out of time, was no less hissed, than one who was faulty in the pronunciation of a verse.⁹ The habit of being present at the public shows, had made even the common people so nice in their ear, that they knew how to object to inflections, and the most minute faults in tone, when repeated too often; even though they were of a nature to please, when introduced sparingly, and managed with art.¹⁰

The immense sums devoted by the ancients to the celebration of shows are hardly credible.

7 Atque corporis motus sua quedam tempora, et ad signa pedum non minus saltationi, quam modulationibus, adhibet ratio musica numeros. *Quintil.*

8 Lucian. in *Orchest.* p. 961.

9 Histrion, si paululum se moveat extra numerum, aut si versus pronuntiatus est syllaba una longior aut brevior, exsultat et exploditur. *Cic. in Parad.* 3.

10 Quanto molliores sunt et delicatiores in cantu flexiones et falsæ voculæ quam certæ et severæ: quibus tamen non modo austeri, sed, si sapius fiant, multitudo ipsa reclamant. *Cic. de orat.* l. iii. n. 98.

viginti motu quia nihil vocis usus impediabat. Inde ad manum cantari histrionibus captum, diversaque tantum sporum voce relecta. *Liv.* l. vii. n. 2.

11 (Livius Andronicus) sui operis actor, cum sæpius a populo revocatus vocem obtulisset, adhibito pueri et tibicinis concentu, gesticulationem tacitus peregit. *Val. Max.* l. ii. c. 4.

The representation of three of Sophocles' tragedies cost the Athenians more than the Peloponnesian war. What expenses were the Romans at in building theatres and amphitheatres, and even in paying their actors? *Æsopus*, a celebrated actor of tragedy, Cicero's cotemporary, left at his death to the son, mentioned by Horace and Pliny¹ as a famous spendthrift, an inheritance of two millions, five hundred thousand livres, (about an hundred and twenty thousand pounds) which he had amassed by acting.² Roscius, Cicero's friend, had a salary of above seventy-five thousand livres (about three thousand five hundred pounds) a year, and must have had more, as he had five hundred livres (about twenty-three pounds) a day out of the public treasury, of which he paid no part to his company.³ Julius Cæsar gave above sixty thousand livres (about two thousand seven hundred and fifty pounds) to Laberius, to induce that poet to play a part in a piece of his own composing. I have repeated these facts, and there are an infinity of a like nature, to show the exceeding passion of the Romans for public shows. Now is it probable, that a people who spared nothing for these shows, who made them their principal employment, or at least their most sensible pleasure, who piqued themselves upon the elevation and refinement of their taste in every thing beside; that this people, I say, whose delicacy could not suffer the least word ill pronounced, the least accent ill laid, or the least improper gesture, should admit this distribution of speech and gesture between two actors, so long upon the stage, if it had offended ever so little the eye or ear. We may believe, without prejudice, that a theatre so much esteemed and frequented, had carried all things to a very high degree of perfection.

It was the music, that engrossed almost all honour in dramatic representations. It presided in the composition of plays: for of old its empire extended so far, and was confounded with poesy. It regulated the speech and gesture of the actors. It was applied to form the voice, to unite it with the sound of the instruments, and to compose a grateful harmony out of that union.

In ancient Greece the poets themselves composed the pronunciation for their pieces. *Musici, qui erant quondam idem poete*, says Cicero,⁴ in speaking of the ancient Greek poets who invented

the music and form of verses. The art of composing declamation, or the pronunciation for dramatic performances, was a particular profession at Rome. In the titles at the head of Terence's comedies, we find, with the name of the author of the poem, and that of the master of the company of comedians who acted it, his name also that had adapted the music to the words; in Latin, *Qui fecerat modos*. Cicero uses the same expression, *facere modos*, to express those who composed the pronunciation of theatrical pieces. After having said, that Roscius purposely repeated some passages of his parts with a more negligent tone than the sense of the verses seemed to require, and threw shadowings into his gesture, to make what he intended to set off the stronger, he adds: "That the success of this conduct is so certain, that the poets, and those who composed the pronunciation, were sensible of it as well as the comedians, and knew all of them how to employ it with advantage."⁵ These composers of pronunciation raised or depressed the tone with design, and artfully varied the manner of speaking. A passage was sometimes directed by the note, to be pronounced lower than the sense seemed to require, but this was done in order that the elevation to which the actor's voice was to rise at the distance of a verse or two, might have the stronger effect.

SECT. IV.

Art of the Pantomimes.

To conclude what relates to the music of the ancients, it remains for me to speak of the most singular and wonderful of all its operations, though neither the most useful nor the most laudable: this was the performance of the Pantomimes. The ancients, not contented with having reduced, by the precepts of music, the art of gesture into method, had improved it to such a degree, that there were comedians who ventured to undertake to act all sorts of dramatic pieces, without speaking a syllable. They called themselves *Pantomimes*, because they imitated and expressed whatever they had to say by gestures, taught by the art of *Saltation* or dancing, without using the aid of speech.

Suidas and Zozyms⁶ inform us, that the art of the Pantomimes made its first appearance at Rome, in the reign of Augustus; which made Lucian⁷ say, that Socrates had seen the art of dancing only in its cradle. Zozyms even

1 Hor. Sat. l. ii. Plin. l. x. c. 51.

2 *Æsopus* ex pari arte ducenties sestertium reliquisse filio constat. *Macrob.* l. ii. c. 10.

3 Quippe cum jam apud majores nostros Roscius histrio sestertium quingenta millia annua meritisse prodatur. *Plin.* l. vii. c. 39. Tanta fuit gratia, ut mercendam diurnam de publico mille denarios sine gregalibus solus acceperit. *Macrob. Satur.* l. ii. c. 10.

4 Cic. de Orat. l. iii. n. 174.

5 Neque id actores prius viderunt, quam ipsi poete, quam denique illi etiam qui fecerunt modos, a quibus utriusque summittitur aliquid, deinde augetur, extenuatur, infatur, variatur distinguitur. *Cic. de Orat.* l. iii. n. 1, 2.

6 Suidas. *Adm.* Zoz. l. i.

7 Lucian. de Orchest. p. 923.

reckons the invention of this art amongst the causes of the corruption of the manners of the Roman people, and of the misfortunes of the empire. The two first introducers of this new art were Pylades and Bathyllus, whose names became afterwards very famous amongst the Romans; the first succeeded best in tragic subjects, and the other in comic.

What appears surprising is that these comedians, who undertook to perform pieces without speaking, could not assist their expression with the motion of their faces; for they played in masks as well as the other actors. They began, no doubt, at first by executing some well known scenes of tragedies and comedies, in order to be the more easily understood by the spectators, and by little and little became capable of representing whole plays. As they were not to repeat any thing, and had only gestures to make, it is easily conceived, that all their expression was more lively, and their action much more animated, than those of the common comedians. Hence Cassiodorus calls the Pantomimes, men whose learned hands, to use that expression, had tongues at the end of each finger: who spoke in keeping silence, and who knew how to make an ample narration without opening their mouths:⁸ in fine, men whom Polhymnia, the muse that presided over music, had formed, in order to show that she could express her sense without the help of speech.

These representations, though mute, must have given a sensible pleasure, and transported the spectators. Seneca⁹ the father, whose profession was one of the gravest and most honourable of his times, confesses, that his taste for these Pantomimical representations, was a real passion. Lucian¹⁰ says, that people wept at them, as at the pieces of the speaking comedians. He relates also,¹¹ that some king in the neighbourhood of the Euxine sea, who was at Rome in Nero's reign, demanded of that prince, with great earnestness, a Pantomime he had seen play, in order to make him his interpreter in all languages. "This man," said he, "will make all the world understand him, whereas I am obliged to pay a great number of interpreters for corresponding with my neighbours, who speak several languages entirely unknown to me." Certain it is, that

the Romans were so charmed with the art of the Pantomimes from its birth, that it soon passed into the remotest provinces, and subsisted as long as the empire itself. The history of the Roman emperors more frequently mentions famous Pantomimes than celebrated orators.

This art, as we have observed, began in the reign of Augustus. That prince was exceedingly delighted with it, and Mæcenus was in a manner enchanted with Bathyllus. In the first years of Tiberius, the senate was obliged to make a regulation to prohibit the senators from entering the houses of the Pantomimes, and the Roman knights from making up their train in the streets.¹² Some years after, there was a necessity for banishing the Pantomimes out of Rome.¹³ The extreme passion of the people for their representations, occasioned the forming cabals for applauding one in preference to another, and these cabals became factions. They even took different liveries, in imitation of those who drove the chariots in the races of the Circus.¹⁴ Some called themselves the *Blues*, and others the *Greens*. The people were divided also on their side, and all the factions of the Circus, so frequently mentioned in the Roman history, espoused different companies of Pantomimes, which often occasioned dangerous tumults in Rome. The Pantomimes were again expelled Rome under Nero and some other emperors. But their banishment was of no great duration; because the people could no longer be without them, and conjunctures happened, in which the sovereign, who believed the favour of the multitude necessary to him, endeavoured to please them by such means as were in his power. Domitian had expelled them, and Nerva his successor recalled them, though one of the wisest emperors Rome ever had. Sometimes the people themselves, tired with the unhappy effects of the cabals of the Pantomimes, demanded their expulsion with as much warmth as they had done their being recalled upon other occasions. *Neque a te minore concentu ut tolles Pantomimos, quam a patre tuo ut restitueret, exactum est*, says Pliny the younger, in speaking to Trajan. There are evils and disorders, which can only be prevented in their birth, and which if time be allowed them to take root and gain credit, assume the upperhand, and become too strong for all remedies.

⁸ *Orchestraum loquacissimæ manus, linguosæ digiti, silentium clamoribus, expositio tacita, quam Musa Polhymnia reperisse narratur, ostendens homines posse sine oris afflatu velle suum declarare.* Cassiod. Var. Epist. l. iv. Epist. 51.

⁹ Senec. in Controv. 2.

¹⁰ Lucian de Orchest. p. 518.

¹¹ Ibid. p. 940.

¹² *Ne domos Pantomimorum senator introiret, ne egredientes in publicum Equites Romani cingerent.* Tacit. Annal. l. i. c. 77.

¹³ Ibid. l. iv. c. 14.

¹⁴ Cassiod. Var. Epist. l. i. Epist. 20.

SUPPLEMENT BY THE EDITOR.

In all rude and barbarous tribes, the use of song long preceded that of letters. The voice of passion needs but few articulations, and is nearly the same in all human beings, differing only in gravity or acuteness, according to age, sex, or organization of the nervous system. But in proportion as language began to vary and multiply, by additions of new letters and new combinations of articulate sounds in particular societies, this primeval and instinctive language, common to and understood by all, first became gradually weakened, and at last unintelligible, except to particular tribes who used the same language. That music is most expressive of the intensity of the passions, whose movements are least impeded by difficult articulations: therefore, one language is much more fitted for musical purposes than another; and in this respect, the Greek language (with the exception, perhaps, of the Sanscrit), of all those ever spoken by man, is the most fitted for conveying pleasing sounds, and hence the superior excellence of Greek music to that of all other nations in point of melody and flexion.

Instrumental music was long posterior to vocal music, and the honour of inventing it scripture ascribes to Jubal, the sixth descendant from Cain. Our author, who, from a mistaken piety, is zealous for confining music solely to religious purposes, censures Jubal as being the first who deviated from the simple and religious music of the antediluvian times, by inventing and employing instrumental music for the purposes of sensuality and voluptuousness, and withdrawing mankind from the pure worship of God. As scripture simply states the fact of such invention, I do not feel myself warranted to acquiesce in the censure passed upon it by Rollin. I see no more ground for censuring Jubal on this account, than for passing a similar censure on Tubal Cain because he was the inventor of arts, and the instructor of such as wrought in brass and iron. This prejudice of our author is borrowed from the Platonists, and those fathers of the church, who, imbibing their notions, ascribed the origin of civil society, of property, the building of cities, and other inventions in science and art, to wicked men, and esteemed them as great evils. Plato regarded music as fit only for the gods and the celebration of religious worship, or as a mere vehicle for moral and religious lectures for the instruction of youth, and rigidly censured all such music as was used in theatres, social festivity, or domestic amusement. We might as well argue against the use of bread as aliment, because it is administered in the most solemn rite of our religion, as against the use of music for social festivity, because it is used in the worship of God. That music, whether vocal or instrumental, or both, has been abused to the worst of purposes, is a melancholy fact, for what

blessings have not been abused? but to infer from this, that all musical sounds are immoral, except when used on solemn occasions, is quite illogical and absurd, and savours of downright fanaticism. That the descendants of Cain, of whom Jubal was one, were generally wicked, as contrasted with the Sethites, is too notorious a truth to be denied, but that they were universally so, from Cain down to the deluge, I dare not positively affirm. Besides, it will not follow that because certain arts and sciences were invented by wicked men, therefore they are wicked inventions.

All who are acquainted with modern music, even in the slightest degree, know that it is composed of melody, consonance, and dissonance, and that vocal sounds are those which are most agreeable to the ear, and next to these, those which can be sustained, swelled, and diminished at pleasure—such sounds as are produced by the violin, flute, and hautboy. In modern instrumental music, the organ bears the palm, because capable of producing the greatest effects, as it can not only imitate a number of other instruments, but is also so comprehensive as to possess the power of a numerous orchestra. Still, however, it wants expression, and a more perfect intonation. To critical ears that music is most agreeable which to the charm of novelty adds refinement and ingenious contrivance. On the contrary, to the ignorant that music is most pleasing which is familiar and common.

Our author, in discussing the origin and progress of ancient music, has confined himself solely to the Greeks, Hebrews, and Romans, and chiefly to the first of these nations, because they brought music to the greatest perfection. But it may be asked, had the Greeks no precursors in the art and practice of music? Was music solely an invention of theirs, or was it derived from a foreign source, and subsequently improved by them, till Greek music attained that high state of perfection which rendered it superior to that of all other nations? The latter seems to have been the fact, and Egypt appears to have been the country whence the primitive music of Greece was derived. The history of music may be said to commence with that of Egypt, in which country, says Dr. Burney, all human intelligence seems to have sprung. Diodorus Siculus has, indeed, asserted, that the cultivation of music was prohibited among the ancient Egyptians, that they regarded it not only as useless, but even as noxious, rendering the minds of men effeminate. But in this Diodorus is at variance with Plato, an earlier writer, and who had himself visited Egypt, in order to inform himself of its arts and sciences, and amongst these of its music. He tells us, that music formed an essential part of Egyptian education, that nothing but beautiful forms and fine music were permitted to enter into the assemblies of

the young; that it was immutably fixed by law what forms and what music should be exhibited in their temples, that their music was the work of some deity, or some divine man, as in fact they (the Egyptians) say, that the music which has been so long preserved was composed by Isis, and the poetry also. But even Diodorus contradicts himself, in his assertion above quoted, for he not only tells us that music and musical instruments were invented by the Egyptian deities, Osiris and Isis, Orus and Hermes, but also, that Orpheus had from Egypt the fable of his descent into hell, and the power of music over the infernals, and then enumerates the great poets and musicians of Greece who had visited Egypt in order to inform themselves in the arts. Herodotus, who had travelled into that country, 300 years before Diodorus composed his *Bibliotheca*, and 100 years before Plato, mentions music as being used in their festivals and religious rites. He tells us, that in the great festival of Diana at Bubastis, men and women embarked in boats promiscuously in great numbers on the Nile, and that during the voyage some of the women beat upon a tabor, whilst part of the men played upon a pipe, the rest of both sexes singing and clapping their hands at the same time. It may be thought needless to prove that the ancient Egyptians were acquainted with music, for what tribe or nation has ever existed but which in some degree cultivated music, whether vocal or instrumental, or both. But it is necessary to show that the ancient Egyptians had music of both kinds, in order to prove that the early Greeks, the great improvers of the art, obtained it from that country. Herodotus further says, that the Egyptian females, in the processions of Bacchus or Osiris, carried the images, singing the praises of the god, and were preceded by a flute; that among other memorable customs, the Egyptians sung the song of Linus, like that which was sung by the Phœnicians, Cypriots, and others, who varied the name according to the various languages they spoke. He further states, that the person honoured in this song (Linus), was evidently the same person age whom the Greeks celebrated, and wonders how the Egyptians had the knowledge of him, because they seem to have honoured him from time immemorial. The Egyptians, says he, call him by the name of Maueiros, and say that he was the only son of the first of their kings, but, dying an untimely death in the flower of his age, he is lamented by the Egyptians in this mourning song, which is the only composition of the kind used in Egypt. Strabo speaks of songs appointed by law in Egypt, and of a certain species of music established by government, exclusive of all others. The Greeks, who, as Burney justly remarks, lost no merit by neglecting to claim it, unanimously confess that most of the ancient musical instruments were of Egyptian invention, as the triangular lyre, the monaulos or single flute, the tymbal or kettle drum, and the sistrum or cymbal, a sacrificial instrument, which was so multiplied by the priests in religious ceremonies, and in such great favour in general amongst the Egyptians, that Egypt was often called in derision the land of sistrums, as Greece was denominated that of the lyre.

The Dorians are by Herodotus derived from Egypt. Now, as the Dorian, Phrygian, and Lydian musical modes were of the highest antiquity amongst the Greeks, what is more probable than that the Dorians, an Egyptian colony,

carried with them the music, and musical instruments of their native country. The musical profession was hereditary in Egypt, and the Lacedæmonians, a Dorian race, restricted, as Herodotus tells us, like their Egyptian progenitors, the profession of music to one family. When Diodorus, therefore, says, that the cultivation of music was prohibited in Egypt, he must mean that new music was so, and that the old music, being deemed sacred, was confined solely to the priesthood, and its use restricted to religious worship. In fact, both sculpture and music were circumscribed by law in Egypt, and continued invariable there during the reigns of the Pharaohs, their native hereditary monarchs. No improvement could consequently be made in either. Whereas, in Greece, with the exception of the Lacedæmonians, a semi-barbarous race, both were progressively improved, and carried to the highest pitch of perfection that antiquity could boast of, especially sculpture, the practice of these arts being neither circumscribed by law, nor confined to one caste, family, or tribe, as in Egypt and India. It is clear therefore, that the early Greek music was of Egyptian origin, and that it was for a long time, as in Egypt, confined to the services of religion. We have not only the admission of the Greeks themselves, that their early music was of Egyptian origin, but we have also, both at Rome and in the tombs of the kings at Luxor in Upper Egypt, such clear proofs of the high antiquity of music in that country, as to render the fact wholly incontestible. In modern Rome, the most ancient remains of human art and industry still subsisting, are the Egyptian obelisks. Two of them in particular are supposed to have been erected at Heliopolis or On by Sesostris several centuries prior to the Trojan war. These were conveyed to Rome by order of Augustus subsequent on his conquest of Egypt, one of which he placed in the *Circus Maximus*, and the other in the *Campus Martius*. This latter, the largest of all those that were brought to Rome from Egypt, was thrown down and broken, when Rome was sacked and burnt by the constable of Bourbon, general to the emperor Charles V., A. D. 1527, and still lies prostrate in the *Campus Martius*. It is there known by the name of the *Guglia Rotta* or Broken Pillar. Upon this obelisk, amongst other hieroglyphics, is represented a musical instrument of two strings, with a neck to it much resembling the *calascione*, a modern Italian musical instrument, still commonly used throughout the kingdom of Naples. This instrument, from its form and great antiquity, deserves particular attention, and a draught of it, made under the inspection of the celebrated Dr. Burney, is given in the first volume of his work on the History of Music, equal in size to the hieroglyphic on the obelisk. By being furnished with a neck, this instrument, though possessing but two strings, was capable of producing from them a great number of notes; for instance, if these were tuned to each other, says Burney, they would furnish that series of sounds which the ancients called a *heptachord*, consisting of two conjunct tetrachords, as b, c, d, e; e, f, g, a, and if the strings of this instrument, like those on the *calascione*, were tuned fifths, they would produce an octave or two *disjunct tetrachords*, an advantage which none of the Greek instruments seem to have possessed for long after this column was erected. Burney further states, that he has

never been able to discover in any remains of Grecian sculpture, an instrument furnished with a neck; and Montfaucon says, that in examining the representations of near 500 ancient lyres, harps, and citharas, he never met with one in which there was any contrivance for shortening strings during the time of performance, as by a neck and finger board. Such an instrument, therefore, as the one above described, is not only a proof that music was cultivated by the Egyptians in the most remote antiquity, but also, that they had discovered the means of extending their scale, and multiplying the sounds of a few strings, by the most simple and commodious expedient. We are told by Proclus, in his commentary on the *Timæus* of Plato, that the Egyptians recorded all singular events, and *new inventions*, upon columns or stone pillars. If this be true, as the great obelisk is said to have been erected by Sesostris at Heliopolis, it will in some measure fix the time when this *dichord* or two stringed instrument was invented. At what time Sesostris lived is impossible to determine, but of this we are certain, that it was considerably prior to the Argonautic expedition, which took place 1280 years, A. C. If musical instruments, such as the harp and tabret, were common among the pastoral tribes of Mesopotamia in the time of Laban, the father-in-law of Jacob, we may surely conclude, that in Egypt, where civilization and improvement were then carried to a much higher pitch, musical instruments, of various kinds, were then known.

It was the custom of the ancients, to refer all useful inventions to the gods, and amongst others that of music and musical instruments, which the Egyptians ascribed to Hermes or Thoth. The fact seems to be this, that all the writers of profane history, even the earliest of them, lived but a few centuries before Christ, and so long after the invention of many of the useful or ornamental arts that the memory of their inventors had perished, and they had no other shift, therefore, but to attribute them to some god, or deified hero. Therefore, when it is said that the Egyptian Hermes was the inventor of music and musical instruments, the conclusion is evident, that the invention of these was lost in the night of antiquity. This wondrous personage according to them discovered and invented every thing, and completely forestalled all the knowledge of succeeding ages, for what did not he and his contemporary Osiris invent? Language, theology, medicine, philosophy, anatomy, agriculture, poetry, music, musical instruments, wrestling, dancing, &c. Posterity had nothing left to invent. They had but just to reap without labour and without ingenuity, the fruits of the wonderful discoveries of Hermes. We are told by Apollodorus, that Hermes one day walking along the banks of the Nile, happened to strike his foot against a tortoise, the flesh of which being dried and wasted by the sun, nothing was left within the shell, but nerves and cartilages, which being braced and contracted by desiccation, were rendered sonorous. The sound produced in consequence of this accident so pleased Hermes, as to suggest to him the idea of a lyre, which he constructed in the shape of the tortoise, and strung it with the dried sinews of dead animals. This lyre had three strings, which produced as many different sounds, the grave, the mean, and the acute; the first corresponding to winter, the second to spring, and the last to summer.

The Egyptians and ancient Greeks had no more than three seasons in their annual calendar, spring, summer, and winter; which were called *horæ* or the hours. After the apotheosis of Hermes or his being received into the college of the gods, his works were carried about in processions with great pomp and ceremony, and the first who led the procession was the chanter or singer, who had two of Hermes' books in his hands, while others bore symbols of the musical art; among the titles of his books, as preserved by Fabricius, in his *Bibliotheca Græca*, lib. 1. there are three that treat of the hymns of the gods, hymns, and instruments; and among his inventions, are enumerated, *Musica* or the nature and properties of sound, and the use of the lyre. We have consequently two musical instruments of high antiquity in Egypt, the *dichord* represented on the obelisk at Rome, and the *trichord* invented by Hermes.

That the Egyptians had a very early knowledge of instrumental music is evident from the 15th of *Exodus*. In this sublime Hebrew poem, we have the first hymn or song of gratitude to the Divine Being on record. It contains the pious effusions of Moses, after the passage of the chosen tribes across the Red Sea had been effected by miraculous agency, and the destruction of the haughty monarch of Egypt and his pursuing host. On this occasion, Moses was seconded by Miriam the prophetess, who took a timbrel in her hand, and all the women went out after her with timbrels and with dances, and Miriam answered them, saying, "Sing ye to the Lord, for he hath triumphed gloriously, the horse and his rider hath he thrown into the sea." Here is an early instance of women being permitted to bear a part in religious worship, and here we have vocal music accompanied with *instrumental* and with *dancing*. The *Dithyrambs* or hymns in honour of Bacchus, of the Greeks, are supposed to be derived from Egypt. These were always accompanied by instruments and by dance, even after they were incorporated into tragedy. Now as Miriam was an Egyptian (if it be lawful to call her so, because born there), and just escaped from that country, where she had been educated, it is natural to suppose, that the *dance* used now, and established afterwards by the Hebrews in the celebration of religious rites, was but the continuation of an Egyptian custom, practised, as was before said, in the festivals of Bubastes. We find music and dancing soon after this ceremony applied to another, which was indisputably of Egyptian origin, for the people having forced Aaron, in the absence of Moses, to make them a golden calf, in the likeness of the *Egyptian idol Apis*, were found singing and dancing before it by Moses, at his return to the camp. The trumpet of the jubilee, ordained to be sounded so soon after the *Exodus*, must also have been an Egyptian instrument. Among the acquirements obtained by Moses, during his education as the adopted son of Pharaoh's daughter; rhythm, harmony, and music, are enumerated by Clemens of Alexandria. The *monaulos*, or single flute, is said by several writers, not only to be an Egyptian instrument, but even of much higher antiquity than the lyre. The Egyptians called it *phoinix* or the crooked flute. Its shape was that of a bull's horn, as may be seen in many gems, medals and remains of ancient sculpture. Not only the form, but also the manner of holding it, is represented by Apuleius, lib. xi., of his *Metamorph.* when speaking of the mysteries of Isis. 'After-

wards came the flute-players, consecrated to the great Serapis, often repeating upon the *crooked flute*, turned towards the right ear, the airs commonly used in the temple.' All the representations of this instrument so much resemble real horns, that they encourage a belief of its great antiquity, and that not only were the first instruments of this kind suggested by the horns of dead animals, but also the horns themselves were converted into musical instruments, at least, those trumpets sounded by the Hebrew priests at the siege of Jericho, we are told, were made of rams' horns. Before the invention of the monaulos or single flute, music could have been little more than metrical, as no other instruments but those of percussion were known, as the lyre, timbrel, harp, &c. When by the invention of wind instruments, the art of sustaining and refining tones was first discovered, the power of music over mankind would be irresistible, from the agreeable surprise which soft and lengthened tones must have occasioned.

But other proofs can yet be given, that the Egyptians had musical instruments in use among them, of much greater variety and perfection, than any of the instruments already mentioned, and that at a time, when the generality of mankind were in a state of the utmost barbarism. These proofs have been found in Upper Egypt by recent travellers, when exploring the ruins of Thebes, or Diospolis, the divine city; the primeval capital of Egypt. Among others is the magnificent tomb of Osymandyas, the walls of which are still adorned with sculptured instruments of music. Now as Osymandyas, whose tomb this is imagined to be, both by Pococke and Norden, reigned 27 generations before Sesostris, according to Diodorus Siculus, which latter prince, according to Dr. Blair's Chronological Tables, reigned 1485 years before our era; it will throw back the invention and use of musical instruments in Egypt, 4000 years from the present period, or 2188 years B. C., an epoch anterior to the call of Abraham. Mr. Bruce visited the same stupendous sepulchre, and confirms the account of Pococke respecting the musical instruments, sculptured on the walls of the cavernous recess. The entrance to this, and other tombs, cut in the mountain, is called Biban-ul-Molouk, or Gates of the Kings. In this entrance, says Bruce, are two pannels, one on each side. On that of the right, is the figure of the *Scarabæus Thebaicus*, or Theban beetle, supposed to have been the hieroglyphic of immortality. On the left, is the crocodile, fixed upon the Apis, or Egyptian idol calf, with his teeth, and plunging him into the waves of the Nile. These are both moulded in basso-relievo in the stucco itself. At the end of the passage on the left hand, is the picture of a man playing on a harp, painted in fresco, and quite entire. The harper is clad in a habit made like a shirt, such as the Abyssinian women still wear, and the men in Nubia. His action is well represented, his left hand seems employed in the upper part of the instrument among the high notes, while stooping forward, he seems with his right hand to be beginning with the lowest string, and promising to ascend with the most rapid execution; which shows, that such a mode of execution was then common, that great performers were then frequent, and that music was well understood, and diligently pursued. Bruce computes the stature of the harper to be 5 feet 10 inches, and the harp to be about 6½ feet in extreme length. It supports

itself apparently in equilibrio on its base, and needs only the guidance of the player to keep it steady. It has 13 strings, the length of which and the force and freedom with which they are handled, show that they are made in a very different manner from those of the lyre. This harp is of a much more elegant form than the Grecian triangular lyre. Part of the frame opposite the longest string is wanting, which must have greatly improved its tone, but must have rendered the instrument itself weaker and more liable to accidents, if carriage had not been so convenient in Egypt. The back part is the sounding board, composed of four thin pieces of wood joined together in form of a cone; that is, growing wider towards the bottom, so that as the length of the string increases, the square of the correspondent space in the sounding board in which the tone is to undulate, always increases in proportion. The ornamental parts of this harp are also executed in the very best manner. The bottom and sides of the frame seem to be veneered or inlaid with ivory, tortoise shell, and mother of pearl, the ordinary produce of the neighbouring seas and deserts. It would even now be impossible, says Bruce, to finish an instrument with more elegance and taste. Besides the elegance of its form, it must be observed, how near it approached a perfect instrument, wanting only two strings of having two complete octaves in compass; whether these were omitted intentionally or not, it is impossible to determine. In the time of David, many ages posterior to the epoch of this harp, the Jewish harp had only ten strings. But as David, while he played upon it, both danced and sung before the ark; it is plain, that his harp was but of small volume, little exceeding our guitar; and by no means worthy to be compared to the Theban, whether in volume, or in variety and compass of sound. This Theban harp, furnished with so many strings, and so elegantly executed, and painted with such truth and spirit, at the end of the Biban-ul-Molouk, or Gates of the Kings, that lead to the regal tombs of the Pharaohs, is an incontestible proof, says Bruce, stronger than a thousand Greek quotations, that geometry, drawing, mechanics, and music, were at the highest perfection when it was made, and that what we deem was in Egypt the invention of arts, was only the beginning of the epoch of their renovation. Burney, a most competent judge in musical antiquities, declares this harp to be the most curious and beautiful of all the ancient instruments that have come to his knowledge. The number of strings, its size and form, and the elegance of its ornaments, awake reflections of the most solemn and humiliating nature. What is Egypt now to what was Egypt then? When walking amidst the ruins of a city, whose destruction was prior to the foundation of most cities known to fame, the mind is lost in the immense antiquity of the painting in which this harp is represented, and of those varied and gigantic masses of sculptured grandeur which arrest and rivet the eye. How have the mighty fallen; how hath the golden city ceased! The immense space covered with these masses once resounded with the voice of music and of song; but more than 25 centuries have elapsed since the glory of Thebes has passed away, and since that country, the pristine abode of the sciences and arts, has become the most abject and degraded of kingdoms.

Another harp, but far posterior to it in point

of antiquity, is represented in basso relievo at Ptolemais, in Cyrene, a city built by Ptolemy Philadelphus, and which is there twice represented. It has 15 strings, or two complete octaves; but the addition of these two strings has also caused the addition of a forepiece, to sustain the crossbar above-head, which bespeaks its Theban origin: indeed, it is plainly Egyptian, as the Greeks never had a harp with so many strings.

According to Bruce, the Abyssinians have a tradition, that the sistrum, lyre, and tambourine, were brought from Egypt to Ethiopia by Thoth, in the very first ages of the world, which may be esteemed another proof of the antiquity of Egyptian music. It is somewhat wonderful, that, with such a model before their eyes as the Theban harp, its form and use should not have been perpetuated by posterity, but that, many ages after, another, of a kind vastly inferior both in size and number of strings, should supersede it. It appears, however, that the arts and sciences of Egypt were long lost before prose was written in Greece; as no historian of that country ever saw Egypt in the days of its pristine prosperity. Pythagoras was indeed there, but at a time when its independence was for ever closed by Cambyes the son of Cyrus. From that period, 525 years A. C. its inhabitants were always under a foreign yoke; and, consequently, from that disastrous epoch may be dated the decline of arts and sciences among them. The genius of the Magian system was at utter variance with the polytheism of Egypt, and their Persian conquerors were never a scientific people. During the dynasty of the Ptolemies, indeed, arts and sciences, particularly music, were patronised and cultivated: but these arts and these sciences were wholly Greek, and their professors Greeks; for the natives had long lost every thing but the superstitious rites and ceremonies of a religion, the most idolatrous of any in the ancient world. They had no books but hieroglyphics, which were now no longer intelligible even to the people themselves, and no books were written in Egypt after the time of Alexander but in the Greek language.

During the reign of the Ptolemies, music was greatly cultivated and encouraged at Alexandria. Athenæus, in his minute description of the Bacchic festival instituted by Philadelphus, tells us, that more than 600 musicians were employed in the chorus, and that among these were 300 performers on the lyre. One of the speakers in Athenæus' Feast of Wisdom, says, "It does not appear by the writings of any historian, that there ever was a people more skilled in music than those of Alexandria; for there is not a wretched peasant or labourer among them who is not only able to play on the lyre, but is also a perfect master of the flute." The father of Cleopatra, and the last of the Ptolemies, was denominated *Auletes*, or the Flute Player, from his excessive attachment to that instrument. This prince was so enamoured of his own abilities in this species of excellence, that he instituted musical contests at his palace, and there openly disputed the prize; and as the dress of players on the flute among the ancients was peculiar to that profession, this sovereign condescended to wear the robe, the buskin, the crown, and even the bandage and veil of a Tibicen, as may be seen on a beautiful amethyst in the pos-

session of the French king, of inestimable value, which is supposed to have been engraved by command of this prince, and worn by him, to gratify his vanity on account of his musical excellence. His violent passion for music and the company of musicians, gained him the epithet of *Neos Dionisos*, or the New Bacchus, the patriarch of extravagance.

Respecting the music of the ancient Hebrews, little can be said concerning it, and that little is wholly contained in the Bible. What were the musical instruments invented by Jubal is unknown; because the precise meaning of the Hebrew terms translated *harp* and *organ* is not settled. Respecting the musical instruments used by Miriam and the Israelitish women, we have already spoken, when treating of Egyptian music. No other musical instruments besides timbrels are mentioned during the administration of Moses but trumpets: one, the *Jubilee trumpet*; and another, for assembling the people and regulating the encampments. This last was made of silver, and differed only in that respect from the jubilee trumpet. We read of the feast of trumpets, Numb. xxix. i. in the month of September, which is supposed to have been the celebration of harvest-home. As the feast of trumpets was in the seventh month, so the jubilee trumpet was ordered to be blown in the fiftieth year, or when the seven times seven years were accomplished. The trumpets of rams' horns, used at the siege of Jericho, seem to have been less musical instruments than military signals for the assailants to march and shout by, in order, by their noise, to terrify and dismay the enemy. No mention of music is further made till the song of Deborah and Barak, Judg. v. which seems to have been sung in dialogue, and wholly without instruments. About 50 years subsequent to this event, the unfortunate daughter of Jephthah, upon hearing of her father's success over the Ammonites, went out to meet him with timbrels and with dances. From this time to the installation of Saul into the regal office, the sacred text is wholly silent about every species of music but that of the warlike trumpet. But here an incident occurs which merits attention, namely, that music was as nearly allied to *prophecy* as to *poetry*. The prophet informs the newly anointed king, that, on coming to Bethel, he should meet a company of prophets coming down from the high place, with a psaltery and tabret, and a pipe and a harp before them, and that they would prophesy. He tells him further, "And the Spirit of the Lord shall come upon thee, and thou wilt prophesy with them." In the Pagan world, musicians were anciently so venerated that they were denominated prophets and sages. *Vates*, in Latin, is a common name for prophet, poet, and musician. The *Aoidos* of the Greeks, or bard, combined, or was believed to combine, the three characters now mentioned. With Homer, the *Aoidos*, or bard, is *Theios*, divine; *Thespis*, prophetic; *Ericos*, most venerable; he is the darling of the muses; he sings from the gods; and if he touches upon an improper subject, it is not the *Aoidos*, or bard, that is to be blamed, but Jupiter, who manages mortals just as he pleases. The oracles of the ancients were delivered in song; and the Pythian priests, who composed into hexameter verse the loose and disjointed expressions of the agonizing Pythia, were styled prophets. These, according to Plutarch, were seated round the sanctuary, in order to receive the words of the Pythia, and enclose

1 Lib. iv. p. 176. cited by Burney, vol. i. p. 220.

them immediately into a certain number of verses.² Olen, one of the first priests of Apollo, was at once both a poet and a prophet; and Phemonæ, the first priestess at Delphi, is said to have delivered her oracles in verse, solely by inspiration, without study or assistance. A certain degree of madness or fury was judged a sure token of a prophetic faculty; as in the case of the oracular Sybil, and the unhappy Cassandra, who was cursed with a knowledge of futurity, and to have her predictions disbelieved. Plato tells us, that God, depriving the poets of their understanding, uses them as his ministers, soothsayers, and holy prophets, to make us, the hearers, know that it is not of themselves they say such high and wonderful things, not being in their wits; but that it is God himself who speaks to us, and pronounces by them. Such kind of poets who composed extempore verses, and accompanied them with a musical instrument, were called rhapsodists. The improvisatore of Italy is still accompanied by an instrument, like the Greek rhapsodists and the ancient prophets, and Italian poets who write down verses, sing at the composing of them.

This union of poetry, prophecy, and music, is frequent in scripture. "Moreover David, and the captains of the host, separated to the service of the sons of Asaph, and of Heman, and of Jeduthun, who should prophesy with harps, with psalteries, and with cymbals:—of the sons of Asaph, four, who prophesied according to the order of the king;—of Jeduthun, six, who prophesied with a harp, to give thanks and to praise the Lord;—and of the sons of Heman, the king's seer in the words of God, fourteen, to lift up the horn."³ But the most striking instance of the union of music and poetry is that of Elisha the son of Shaphat. The kings of Israel, Judah, and Edom, being on the point of destruction for want of water in the desert, consulted, in this distressing emergency, the prophet. "And Elisha said, Bring me a minstrel. And it came to pass, when the minstrel played, the Spirit of the Lord came upon him, and he said, Thus saith the Lord, Make this valley full of ditches," &c. Instrumental music seems to have been used by the prophets as a means of tranquillizing their minds, and fitting them for the reception of the Divine afflatus. More than this we cannot say on so mysterious a subject. Sometimes in scripture a prophet was little more than a poet or psalmist, who sung extempore verses to the sound of an instrument, as the sons of Jeduthun and Asaph. Sometimes, indeed, such inspiration was of no great benefit to the person on whom it was conferred, nor on his hearers, as in the case of Saul, on whom the evil Spirit from God came, and he prophesied in the midst of the house.⁴ That David sustained the triple character of a prophet, poet, and musician, is well known from scripture. On account of his great skill in music, he was called to administer relief to Saul, by the power of his harp, afflicted with an evil spirit. If it be possible for music to operate medicinally with success, it may be imagined a palliative, if not a cure, for a wounded mind. When the mind is under the pressure of a nervous malady, or warped and agitated by contending passions, it seems, at such a time, to be

a fit subject for soft and soothing strains to work on as powerful anodynes. At any rate, the power of David's music wrought a salutary effect on the mind of the afflicted monarch, who had offended God by his disobedience.

After David's victory over Goliath, we read, that the women of the cities of Israel met him with dances and singing, with tabrets, with joy, and instruments of music. "And the women answered one another as they played, and said, Saul hath slain his thousands, and David his ten thousands." This is an indubitable proof of a chant in dialogue, or a *dui cori*, being in early use. In the 68th Psalm, we read, that damsels, playing with timbrels, joined in the procession before the ark. "The singers went before, the players on instruments followed after; amongst them were the damsels playing on timbrels," ver. 25. "Women" says Calmet, "whom the apostle forbids to speak in church, had the privilege to sing there, in company with the men." We read also of the three daughters of Heman, who, in conjunction with their fourteen brothers, were for song in the house of the Lord. But such exalted female personages as Miriam, Deborah, Judith, and Hannah the mother of Samuel, are all regarded by the modern Jews as poetesses and prophetesses, not as singers solely.

It is needless to repeat what our author has so well said respecting the introduction of vocal and instrumental music in the ministry of sacrifice, and worship of the ark. It appears that David himself acted as master of the sacred band; and, filled as his soul would be, with love divine and gratitude to Him who had raised him from the humble occupation of a shepherd to be ruler of Israel, never thought he degraded himself by singing before the Lord, any more than by conducting the musical performers on great and solemn occasions. Before this time, it does not appear from scripture that any other instruments than trumpets, or singing than in a general chorus of the assembled multitude, was used in the daily celebration of religious rites.

Respecting the musical instruments mentioned in the Psalms, almost all of which are enumerated in the last Psalm, it is impossible to ascertain, from their Hebrew names, their precise nature and form. There are not less than six different translations of the third, fourth, and fifth verses of that Psalm, namely, the Latin, Chaldee paraphrase, Syriac, Vulgate, Arabic, and Septuagint, which show the impossibility of clearing up this point. No drawings or descriptions of these instruments have descended to us, and hence it is that all translators, whether ancient or modern, ignorant of the real forms and properties of these Hebrew instruments, have given to them the names of such as were most common in their respective countries. The triumphal arch of Titus, at Rome, where it is supposed that the spoils brought by that conqueror from Jerusalem are exactly delineated in sculpture, affords the only hope of acquiring a true idea of Jewish instruments. Among these, are several musical instruments, particularly the silver trumpets, called in Hebrew *Chatzotzereth*, and horns, supposed to resemble the *Shauens*, so often mentioned in scripture, called in Hebrew *Keranim*, or sacerdotal trumpets. After all, the arch so called was not erected till some time after the death of Titus, and the instruments are of no uncommon form. The trumpets are long straight tubes, as modern trumpets would be if

² De defectu orac.

³ 1 Chron. xxv.

⁴ 1 Sam. xvii. 10.

not folded up for the convenience of the player, and the horns are such as frequently occur in ancient sculpture. Engravings of these trumpets and horns, from the Titian arch, are given by Dr. Burney, in the first volume of his *History of Music*, Plate IV. No. 6, and 8, and Plates V. and VI.

The reign of the great Solomon was, to use a classical phrase, the Augustan period of Jewish science and literature. The queen of the South came from the uttermost parts of the earth to hear the wisdom of the Jewish monarch; and confessed, when she heard it, that the half had not been told her. We may be certain that music and poetry would be cultivated under the reign of a prince who spake three thousand proverbs, and who composed a thousand and five songs. But whether, like his illustrious progenitor, he was a practical musician, does not appear in the scripture account of his reign. In *Ecclesiastes* ii. 8, music is mentioned by him as one of those vain luxuries and vexations of spirit with which he found himself satiated. "I gat me men singers and women singers, and the delights of the sons of men, as musical instruments, and that of all sorts." This is all that we know of his personal attachment to music. Josephus tells, indeed, that at the dedication of the temple, Solomon made 200,000 trumpets, according to the ordinance of Moses, and 40,000 instruments of music, to record and praise God withal; as the psaltery and harp, of a mixed metal, four parts gold and the fifth part silver.¹ This writer has been often accused of inaccuracy and exaggeration; and respecting music, as Dr. Burney remarks, his accounts bear neither the marks of judgment nor fidelity. The Bible gives us merely to know, that Solomon appointed, according to the order of David his father, the courses of the priests to their service, and the Levites to their charges, to praise and minister before the priests, as the duty of every day required.²

We have little more recorded regarding music among the Jews, till the period of the Babylonish captivity. All that is mentioned is the effect produced by military music, in emboldening them to fight against their enemies, when two splendid victories were obtained, one over Jeroboam, and another over the Ammonites, Moabites, and Edomites. In this latter engagement, the musicians acted as a vanguard in the field, with their instruments. In a similar manner, the Gallic, German, and British Druids, who were bards as well as priests, animated their countrymen to the combat. During the captivity, as the Jews were denied the use of their wonted religious rites, they had neither time nor inclination for domestic festivity, so that music must have been neglected.

That the Chaldeans cultivated music is plain from the book of Daniel, chap. iii. "Nebuchadnezzar the king made an image of gold, whose height was threescore cubits, and the breadth thereof six cubits."—"Then an herald cried aloud, To you it is commanded, O people, nations, and languages, that at what time ye hear the sound of the cornet, flute, harp, sackbut, psaltery, dulcimer, and all kinds of music, ye fall down and worship the golden image which Nebuchadnezzar the king hath set up." Here two new instruments are mentioned and translated in our version, sackbut and dulcimer. So various are the opinions of commentators

respecting these two, that scarce any instruments have ever been heard of that have not furnished names for them. It is just as in the case of the Hebrew instruments, that these erudite expounders seem to advance opinions merely to confute them, and, after carrying the inquiring reader into a sea of trouble, leave him, without sail or rudder, to get out as well as he can; or, like Calmet upon that impenetrable word *Selah*, after carrying us through the extensive region of conjecture on his great critical horse, sets us down just where we were taken up. When, at the end of the seventy predicted years, the captive Jews returned, and made an effort to rebuild their temple and re-establish the ancient worship, the number of singers, the children of Asaph, when taken, amounted to no more than 128, and, with their assistance, out of 50,000 people, only 200 singing men and singing women could be mustered, among whom, the instrumental performers must have been included, as no mention is made of them among the other Levites and servants of the temple. What a prodigious defalcation from the 4288 appointed by David!

Nothing more worthy of attention occurs in the subsequent period of Jewish history respecting their music. One thing only remains to be observed, and that is, the material out of which the Jewish musical instruments were made. It occurs in 2 Sam. vi. 5., where it is said, that David and all the house of Israel played before the Lord on all manner of instruments made of fir wood, &c. Now, this species of wood has been preferred both by ancients and moderns in all ages, to every other kind, from its softness and capability of sound. The harp, little guitar, harpsichord and violin in present use, are constantly made of fir wood. Dr. Burney thinks, that as the Hebrew language had originally no vowels, it must have been very unfavourable to music, and that after the introduction of vowel points, the many strong aspirates used instead of the clear and open vowels of other languages, must have corrupted sound, which by the difficulty of producing it from such harsh words, would, of necessity, be very coarse and noisy. The music, therefore, in his opinion, must have been very rough, not only from their language, but from the nature of their musical instruments, chiefly of percussion; from the number of performers, amounting in David's time to 4288, and from the manner of singing at present used in the Jewish synagogue, the chorus of which is composed of clamour and jargon. These circumstances, adds he, must have escaped those who have highly extolled the ancient Hebrew music, or they must have been utterly ignorant of the art of music.³ There is no appearance of proof that the Hebrews had musical characters, so that the melodies used in their religious services, have at all times been traditional, and at the discretion of the singers. However, some are of opinion, that the vowel points were originally musical characters, and a learned Jew consulted by Burney on this subject confirmed it, by saying, that the points served two purposes, as they still do, that of marking the accentuation while reading the prophets, and of regulating the melody in singing them, not only as to long and short, but also as to high and low notes.

1 Lib. i. liii.

2 2 Chron. viii. 14.

3 Burney, vol. i. p. 250.

As to ancient Arabian music, frequent mention is made of it in the book of Job, as an art then in general use. "They send forth their little ones like a flock, and their children dance; they take the timbrel and harp, and rejoice at the sound of the organ." Chap. xxi. 11. "My harp also is *turned* (tuned, says Burney, for the word is a supplement) to mourning, and my organ unto the voice of them that weep;" which last quotation seems to refer to funeral music. It must be observed here respecting the word *organ* used in the quotation above, and frequently in the book of Psalms, that this term is taken from the Greek translation. But the Greeks had no musical instrument at all corresponding to the modern organ, or even an instrument so called. The Greek word *organon* was with them a general name for an instrument, a work, or an implement of any kind. It would have been much better, therefore, if Biblical translators had merely retained the Hebrew and Chaldean names of the musical instruments enumerated in scripture, without attempting to translate them, as the unlearned reader has been thereby deceived into a belief that these instruments exactly correspond in their nature and properties to those used in Greece, or those which are in familiar use in his own country, when the real fact is, that the commentator, the translator, and reader, are all equally in the dark respecting the nature and properties of these oriental musical instruments.

We now come to speak of the music of the Greeks, which, from humble beginnings, from rude essays, and imperfect attempts, rose by successive improvements, aided by their mythology, and the genius of their language, the most musical on earth, to the highest pitch of perfection. Like all other people ignorant of their own origin and early history, the Greeks attributed the invention of music, as almost that of every thing else, of which they could give no account, to the gods. The god Apollo is by universal consent placed at the head of the college of music. This exotic personage, exalted to the honours of godship, was an Egyptian, like the Grecian Mercury, of whom the Egyptian Mercury or Thoth was the real prototype. He was the inventor of the lyre, as Pan was of the flute. The ancient Greek lyre consisted of three strings, as invented by Apollo. His contests with Pan and Marsyas, the inventors of wind music, form a celebrated chapter in the mythological history of music. The oracle of Apollo was at Delphi, where his oracles were not only given in hexameters, but also sung to the sound of the flute. The cock was dedicated to Apollo, because his crowing announced the rising of the sun, as also the grasshopper, on account of his singing faculty, which was supposed to do honour to the god of music. Plutarch says that the grasshopper sings all summer without food, like those men who, dedicating themselves to the muses, forget the ordinary business of life. The swan was regarded by the ancients as sacred to the same deity on two accounts, first, as being, like the crow and raven, gifted with the spirit of prediction; and secondly, as being fabulously supposed to possess extraordinary vocal powers. In the time of Plutarch, who was himself high priest at Delos, the statue of the god there erected, had in its right hand a bow, and on the left stood the three graces, who were furnished with three kinds of instruments, the lyre, the flute, and the pipe. The youth also, says he, who carries the laurel of Tempe

to Delphos, is accompanied by one playing on the flute, and the sacred presents, formerly sent to Delos by the Hyperboreans, were conducted thither to the sound of lyres, flutes, and pastoral pipes. A celebrated hymn, in honour of the god of music, was composed by Callimachus, which was sung and heard by the most polished people on the globe with the utmost religious zeal at his festival, during many ages. A translation of this has been given by Prior, and a specimen of it may be found in Burney.

The muses come next in order, the celebrated Nine, so justly dear to the lovers of genius and art, that the very mention of their names inspire pleasure and respect. They are the only Pagan divinities, whose worship has continued through all succeeding changes of the sentiments and religion of mankind. Professors and lovers of every liberal art in Europe, still revere them, especially the poets, whose allegiance and worship has been steady and uniform, and who seldom (at least until within the present century) undertook the slightest work without previously invoking their aid. Their origin and genealogy are completely mystical, and consequently reputed divine, and any attempt at ascertaining the one or the other would be as fruitless as to attempt to unravel the web of Pagan mythology, or remove the dense gloom that overhangs the mythic period of Pagan history. These female personages are denominated muses, from a Greek verb which signifies to explain mysteries, or dark sayings, because they taught things the most curious and important to know, and which are above the comprehension of common minds. Each of their names is said to include some allegory, and an epigram of Callimachus gives their respective attributes in as many lines as there are muses—

Calliope the deeds of heroes sings;
Great Clio sweeps to history the strings,
Euterpe teaches mimes their silent show;
Melpomene presides o'er scenes of woe;
Terpsichore the flute's soft power displays;
And Erato gives hymns the gods to praise;
Polymnia's skill inspires melodious strains;
Urania, wise, the starry course explains;
And gay Thalia's glass points out where folly reigns.

This epigram, however, does not exactly accord with the ideas of other poets, or of the ancient painters, in characterizing the properties of the celebrated nine. Among the pictures dug out of Herculaneum, are portraits of Apollo and the muses, his companions, from which engravings have been published in the second volume of the *Antiquities of Herculaneum* in Italian. The first portrait is that of Apollo seated on a throne, with a lyre of eleven strings in his left hand, in the character of Musagetes, or conductor of the muses. The second is Clio seated, her head crowned with laurels, holding in her left hand an open volume, which she appears to be reading. On the outside is written "Clio, the Historian:" at her feet are six other rolls, or antique volumes, enclosed in a cylindrical case. The picture of Euterpe had been so much injured by time, that it could not be engraved. But the flute has been usually assigned by the poets as her symbol—

Dulciloquio caiamos Euterpe flatibus urget.
Auson. Idyl. 20.

The third portrait is that of Thalia the comedian, with a comic mask in her left hand. The fourth, Melpomene, the protectress of tragedy.

with a tragic mask in her left hand. Terpsichore, the lyrist, with a small seven stringed instrument in her hand. The belly of it is of a roundish form, and hence it is somewhat uncertain whether it be a lyre or a harp. The sixth is Erato, with a psaltery or long lyre of nine strings. It is more than double the length of that in the hands of Terpsichore. She also holds a plectrum in her right hand, and seems playing with the fingers of her left. The seventh is Polymnia, the fabulist, here represented as the patroness of mimes, with her finger on her mouth in token of silence. The eighth is Urania, with a globe in her hand, as the patroness of astronomy, and the last is Calliope, the poetess, with a roll of paper or volume in her hand, as the muse of heroic verse or epic poetry. That these personages are allegorical seems probable, but every fanciful Greek interpreted them in his own way. The Pythagorians and Platonists make them the soul of the planets in our system, whence the imaginary music of the spheres. The philosophers above mentioned supposed the universe itself, and all its parts, to be formed by the principles of harmony. This hypothesis, Burney observes, does not seem to be merely figurative, as there are traces of the harmonic principle scattered up and down, sufficient to make us look on it as one of the great and ruling principles of the inanimate world, and though there be no proof, or indeed any reason to believe that the Greeks were acquainted with the foundation of some of their philosophical opinions, yet the observation of that eminent philosopher, the celebrated MacLaurin, respecting the Pythagorean system, seems highly probable. When we find their account, says he, (*i. e.* of the Greeks) to be very imperfect, it seems reasonable to suppose they had some hints only from some more knowing nations, who had made greater advances in philosophy. That these more knowing nations were the Egyptians, none can doubt, as from them the first and great outlines of every art and science originally came. MacLaurin gives one instance of the Pythagorean doctrine, which could hardly be supposed to be of Greek origin; the *harmony of the spheres*, and which, in conformity to Dr. Gregory, he explains as follows. If we should suppose musical chords extended from the sun to each planet, that all these chords might become unison, it would be requisite to increase or diminish the retentions in the same proportions as would be sufficient to render the gravities of the planets equal, and from the similitude of these proportions, the celebrated doctrine of the harmony of the spheres is supposed to have been derived.* Certain as this harmonic coincidence is now become, in consequence of the discovery and demonstration of the doctrine of universal gravitation, it must have passed for a Utopian dream till the days of Newton.

The god Bacchus is too important a personage in the mythology of music to be altogether omitted. He was viewed in a much more respectable light by the ancients than by the moderns, by whom he is regarded merely as the drunken god, the patron of gross sensuality and debauchery. Two personages of this name were chiefly distinguished above the rest who bore it,

the Egyptian Bacchus, the son of Ammon, and identical with Osiris, and the Grecian Bacchus, a native of Thebes in Bœotia, the son of Jupiter and Semele, and grandson of Cadmus. The former was one of the elder gods of Egypt, and the latter, the youngest of the Grecian deities. The Dithyrambics, which gave rise to dramatic representations, are as ancient as the worship of the Theban Bacchus, and his mysterious orgies originated the pomp and illusions of the theatre. Many of the most splendid exhibitions upon the stage, for the entertainment of the Athenian and Roman populace, being performed on the festivals of Bacchus, occasioned all those who were employed in them, whether for singing, dancing, or reciting, to be called the servants of Bacchus. There was a place at Athens consecrated to Bacchus the singer, thus named for the same reason, says Pausanias, as Apollo is called the chief and conductor of the muses. Whereas, Apollo was merely the god of music, and the muses the inspirers of music and poetry. Bacchus was the god of drinking and of song, the patron of jolly fellows, who never sing but under the influence of the intoxicating cup. In his orgies, processions, triumphs, and festivals, music was never forgotten, as may be still gathered from ancient sculpture, where not only musicians, male and female, are found regaling him with the lyre, the flute, and with song, but he is also accompanied with fawns and satyrs playing on timbrels, cymbals, bagpipes, and horns, and who are by Suidas called his minstrels, and whom Strabo variously denominates, Bacchi, Sileni, Satyri, Bacche, Lem, Thyæ, Mamillones, Naiades, Nymphæ, and Tityri. These representations have furnished subjects for the finest remains of ancient sculpture; and the most voluptuous passages of ancient poetry, are descriptions of the orgies and festivals of this prince of Bacchanals. The orgia or feasts and sacrifices, performed to his honour in Greece, were chiefly celebrated on the mountains of Thrace, by wild distracted women called Bacchæ. They were called Orphica, from Orpheus their founder. They were denominated orgia tritirica by Virgil, because performed once in three years. Whence these orgia had their first rise is impossible precisely to say, but probably they originated in Egypt, where Osiris was the prototype of the Grecian Bacchus, and thence passed into Greece, Italy, Gaul, and the rest of the Pagan world. They were at first comparatively simple and decent, but in process of time degenerated so much into such enormous licentiousness, indecency, and debauchery, that the Roman senate was compelled to abolish these nocturnal festivals entirely throughout the Roman dominions, in the year 186, A. C. In the Justinian garden at Rome is a marble vase of most exquisite workmanship, representing the orgies of Bacchus. The whole pomp of one of these processions is there admirably engraved. There are seen Bacchus, the Bacchanals, the Menades, the flute-players, matrons, and virgins, with the cymbal and the drum, fawns and satyrs, holding in their hands vases and cups, priests leading the victims destined for sacrifice, as the boar, he-goat, and bull, and lastly, old Silenus himself drunk upon an ass, which he is hardly able to guide. Respecting Bacchanalian songs, Burney observes, that as the ancient Greeks and modern French have had at all times the best wine to drink, they seem to have been the most happy in singing its praises. Anacreon, the drunken

* See MacLaurin's Account of Newton's Discoveries, p. 35. and Gregory's Principles and Power of Harmony, p. 146.

bard of Teos, well authorizes this opinion with respect to the Greeks, and the French have many Anacreons. Bacchus is said by Diodorus to have invented beer for human use in such parts of the globe as are unfit for the culture of the grape. He may with equal justice be said to have invented whisky: at any rate its effects are much more exhilarating, exalting, and inspiring than those of beer, in the opinion of those who have felt and compared the influence of both. For its superior influence we can appeal to the experience of our northern bards, and above all to our countryman Burns, whose songs have more wit, more festive humour, and are more productive of genuine mirth, than all the Bacchanalian songs of antiquity.

The demi-god Pan seems to have been a mere understrapper to Bacchus, a sort of all-work being, equally fitted to act in the capacity of shepherd, musician, dancer, huntsman, and soldier, but was expert in playing upon flutes, and such an excellent piper on the fistula, that Bacchus could not want him. He was the inventor of the syrinx, or pipe of Pan, according to the Greek poets, and his invention of this simple instrument, has given birth to a very beautiful fable in the *Metamorphoses* of Ovid. Silenus, we are informed by Orpheus, was the governor of Bacchus in his youth, and the oldest of the satyrs, from him called Sileni. Like the unfortunate Marsyas, he is said to have challenged Apollo himself to a trial of skill in instrumental music, though he was so happy as to escape with a whole skin. Shepherds dressed in goats' skins have been thought to have furnished the idea of satyrs with goats' feet. It is the opinion, however, of the paradoxical Paw, that the orang-outang has been the prototype of all the fawns, satyrs, Pans, and Sileni of the ancient poets; but this is a very unlikely opinion, as this animal is only to be found in Africa and the southern parts of Asia under the line or very near it, and was not, in all probability, known to the Greeks. It is more probable that, like many other beings in the Grecian mythology, the satyrs were imaginary creatures formed by the fancy of the poets.

Another class of musical demi-divinities, were the sirens, those charming but destructive song-stresses of antiquity. They were three in number, Parthenope, Lygea, and Leucosia. Some make them half women and half fish; others, half women and half birds. This latter is the form ascribed to them by Ovid. There are antique vases of them under both forms. On an Etruscan vase in the grand duke's collection at Florence, the middle siren holds a syrinx with seven pipes, another plays on the lyre with the plectrum, and the third on a monaulos or single pipe. They have wings and birds' feet. Another antique, dug out of Herculaneum, represents one of the sirens in the act of singing, a second playing on the flute, and a third on the lyre. They were such charming singers, that but for the superior skill of Orpheus, the Argonauts would have perished in their perilous voyage. Ulysses himself with great difficulty escaped the same danger. The sirens were in all probability fictitious and allegorical personages like the muses, but of an opposite character. Their charming aspect, beautiful face, and enchanting voice, are emblematical of those destructive pleasures, which first delude and then destroy their unhappy victims. Hence the song of the siren has become proverbial of gilded snares, which catch the thoughtless and simple. Every

age has its sirens, and every siren has her votaries, when beauty and talents, powerful in themselves, are employed for the purpose of seduction. The name is plainly of Phœnician origin, from *sir*, a song, and *sims*, singing, musical. Hence the title of Solomon's Song is *sir asirim*, the song of songs. The foundation of the fable of the sirens, therefore, was in all probability grounded on the accounts of Phœnician navigators, and wrought up into a pleasing fiction, like those of the Cyclops, Harpys, Laistrygons, and others, by the ingenuity of Homer and succeeding poets and mythologists.

Respecting the music of the heroic times, little can be said with certainty. It is impossible to fix in chronological order, the times of the musicians who appeared successively in the mythic or fabulous period. We might as well think to make a world out of chaos, as reconcile the jarring chronologies of that period. Music, says Pliny, was invented by Amphion, the pipe and single flute by Pan the son of Mercury, the crooked flute, by Midas in Phrygia, the double flute, by Marsyas, in the same country. The Lydian measure was the invention of Amphion, the Dorian of the Thracian Thamyris, the Phrygian of Marsyas. The cithara was first framed by Amphion, others say, by Orpheus, others, by Linus. Terpander used it with seven strings, Simonides added an eighth, Timotheus a ninth. Thamyris first played on the cithara without singing; Amphion first sung to it, others say, Linus; Terpander first composed songs to it. Dardanus the Troezenian was the first man who sung to a flute.¹ Both Pliny and Pausanias agree, that Amphion learned music in Lydia, and bringing it thence into Greece, was called the inventor of the Lydian measure. Consequently, according to this account, Amphion was not a Theban, but an Asiatic of Lydia, and was not the inventor of music, but merely brought it into Greece. Chiron the centaur, it seems, was another of the early Greek musicians. As he knew and taught every thing, music, of course, could not be excluded, and it is even pretended, that he taught Bacchus himself to sing, as also Hercules, though Diodorus says, that Linus was his music master. Achilles also learned music under him. A picture dug out of Herculaneum, and one of the best remains of antique painting, represents this centaur as teaching the young Achilles to play upon the lyre. All ancient authors agree, that it was both natural and necessary for heroes to learn music. Not to be able to play on the lyre or to swim, was a reproach in ancient times to every man above the common rank. Next to Chiron are ranked Linus and Orpheus, but which of them was the teacher of the other is impossible to determine. Linus is said by Diodorus to have added the string Lichanos to the Mercurian lyre, and to have also invented rhythm and melody, in which Suidas concurs, who regards him as the first lyric poet. He was the teacher of Hercules to play on the lyre, says Diodorus. But unfortunately, for the poor musician, his robust pupil was so stupid and obstinate, that he was provoked to chastise him, which so enraged the young hero, that instantly seizing the lyre of his master, he beat out his brains with his own instrument. It was a solemn custom among the Greeks, annually to bewail

¹ Nat. Hist. lib. vii.

the death of their first poet, and an altar and a statue were erected to his memory, near Mount Helicon, according to Pausanias. A tender tribute has been paid to the memory of the old bard, by Homer, in his description of the shield of Achilles.

To these a youth awakes the warbling strings,
Whose tender lay the fate of L^orus sings;
In measur'd dance behind him move the train,
Tune soft the voice, and answer to the strain.
B. xviii. ver. 509.

Orpheus is too celebrated a personage to be so slightly noticed, as he has been by Rollin. Burney confesses himself warmed into an involuntary zeal, for the fame of this musical and poetical patriarch; and that, stimulated by the respect and veneration which he found paid to him by antiquity, he became a kind of convert to this mystagogue, and earnestly aspired at initiation into his mysteries, in order to reveal them to his readers. Orpheus eclipsed the fame of all who preceded him. He was a Thracian, and a great traveller, and brought back from Egypt the mysteries and theology of that country. He was also one of the Argonauts, and baffled by superior skill, the fascinating melodies of the sirens. He was also a philosopher, having given in his *Argonautics* a cosmogony, or treatise on the origin of the world, from him called the *Orphic cosmogony*. This cosmogony, which was of Egyptian origin, is so far atheistical, as it excludes God from the actual creation of the world, and supposes a necessary existence of matter in God, and a formation of it without any divine operation, as is shown by Eschenbach, Brucker and Mosheim on Cudworth. He was looked upon by profane authors, as the inventor of that species of magic called necromancy, or evocation of the manes, or raising ghosts, the same as practised by the witch of Endor, and the hymns attributed to him are really mostly pieces of incantation and conjuration. On the death of his wife Eurydice, he retired to a place in Thesprotia, called Aornos or Avernus, where an ancient oracle gave answers to such as evoked the dead. He there fancied he saw his dear Eurydice, and at his departure flattered himself that she followed him; but, upon looking behind him, and not seeing her, he was so afflicted, that he soon died of grief. It was this very journey, and the desire of calling up the manes of his wife, as Saul wished the witch of Endor to call up Samuel, that made it believed he went down into hell. The story has been exquisitely embellished by the poets, particularly Ovid and Virgil, who have given to his lyre such wonderful powers, that all hell itself was charmed with its melody. At its enchanting sound the pale spectres wept, the triple monster Cerberus was mute with delight, the wheel of Ixion stood still, Sisyphus ceased to roll the stone, Tantalus to catch at the treacherous cup, the Danaids to fill the rifted urns, and the vultures to gnaw the liver of Tityus. Moved at the mournful strain, even the ruthless Eumenides sympathized with the hapless bard, and stern Pluto and his grisly queen were melted into pity. Eurydice was restored by the infernal powers, on condition that he would not look at her, till he had quitted the shades; a blessing which he soon forfeited, by too eager and fatal a curiosity. Having made a fruitless attempt to move Charon the ferryman of the Styx, to waft him over, he retired inconsolable, and mourned his fate in such moving

strains, that nature, both animate and inanimate, listened to the sound of his lyre: at length he was killed and mangled by a troop of Bacchanalian females, enraged at the loss of their husbands, who were disciples of Orpheus, and preferred his music to their society. Virgil hyperbolically represents the dismembered head of the hapless bard, whilst rolling down the stream of the Hebrus into which it was cast by these frantic females, as still calling on his Eurydice, with departing breath. But we are told by others, that the musician died a quite different death, being struck dead with lightning, the envied death of the favourites of the gods, as appeared from an inscription on his tomb at Dium in Macedonia, seen by Pausanias. Virgil bestows the first place in his Elysium upon the legislators, and those who brought mankind from a state of nature into society. At the head of these he places Orpheus, in the character of a poetical legislator, who by the powers of melody, had softened the savage inhabitants of Thrace. His lyre was feigned to be taken up to heaven and placed among the constellations, and marked by nine stars, by the nine muses, whose praises he had sung. Of the poems still subsisting under the name of Orphic, and which have undergone two editions, namely, of 1720, and 1764; the titles are, 1. an epic poem, called the *Argonautics*: 2. 86 hymns which are so full of incantations and magical evocations, that Daniel Heinsius, the noted Dutch critic, has denominated them the true liturgy of the devil: 3. a poem on precious stones, and 4. fragments, collected by Henry Stephens. The following invocations are attributed to him. 1. The art of writing, or combining letters. 2. Music. 3. Hexameter verse. 4. Mysteries and theology. 5. Medicine. 6. Magic and divination. 7. Astrology. He is also said by Servius to have first taught the harmony of the spheres, and also by others, to have been the first who imagined a plurality of worlds, or that the moon and planets were inhabited.

Like the preceding musicians, Musæus stands in the barren age of remote time, as Palmyra in the desert. The several characters of philosopher, astronomer, poet, priest, and musician, were united in him. The three latter were constantly united in the same person, in these very early times. He is called by some, the son, and by others, only the disciple of Orpheus, and one of the first poets who versified the oracles. According to the Arundeleian inscription, he is placed 1426 years A. C., at which time, his hymns are there said to have been received in the celebration of the Eleusinian mysteries. He flourished under Cecrops, the second king of the Athenians, and was a writer of heroic poems, of which he composed 4000 for his son Eumolpus. He is placed by Virgil at the head of the most illustrious mortals who have merited felicity in Elysium. There, as Hierophant, he is made the conductor of Æneas to the recess, where he meets the shade of his father Anchises. Nothing of his works now remains, and in the time of Pausanias, only one work of his was extant, a hymn to Ceres, which he made for the Lycomedes. Indeed, the whole of the hymns sacred to Ceres, were both composed and set to music by him. He must be distinguished from other two poets of the same name, one a Theban, and the son of Philammon, and the other an Ephesian, the author of a poem, called *Hero and Leander*, from which

Ovid enriched his epistle which bears the same title. Eumolpus and Melampus are also names of repute in early Greek music, the one being a priest, poet, and musician, and the other a diviner, physician, and musician. Nothing, however, of their musical composition has ever appeared.

But it is in the poems of Homer, that celebrated sire of song, that music assumes most form, where it is mentioned with rapture in more than fifty places of the *Iliad* and *Odyssey*. Music is there in such close union with poetry, that it is difficult to discriminate, to which the poet's praises belong. The lyre, indeed, is constantly in the hands of the bard, but merely as an accompaniment to the voice. Singing is there without instruments, but there is no appearance in his poems, that instrumental music was ever used but in union with vocal. It must be remembered, however, that the word *Ἀοιᾶ*, or lyre, never occurs, either in the *Iliad* or *Odyssey*, as the mere English reader is led to believe from the translation of Pope. The term translated lyre is *Phorminx*, and also another, *Kithara*. Aristophanes is the oldest Greek author, in whose works, *Ἀοιᾶ* occurs. *Phorminx*, *Kithara*, and *Chelys*, are the three Greek terms used by Homer, to express the lyre, harp, cithara, and the Cheles or the testudo; or in other words, stringed instruments. The flute and syrinx, wind instruments, are the only others mentioned by Homer. These latter are specified in the 10th Book, l. 15, 16., where Agamemnon hears dejected, the noise of flutes, and pipes, through the passing wind, during the silence of night, and surveys through the field the multitude of Trojan men. This does not appear in Pope's version, who merely renders the passage thus:—

Hears in the passing wind, the music blow.

without specifying the kind of music.

As in the days of Homer, every poet was a singer, so every poem was a song. As a proof of the attention paid to sense and sound, we have the following lines, in which Agamemnon meeting with Achilles in the shades, tells him, how much his death had been lamented by the Greeks at Troy.

Round thee, the muses, with alternate strain,
In ever-consecrating verse complain,
Each warlike Greek the moving music hears,
And iron hearted heroes melt in tears.
Odyssey, B. xxiv. ver. 77.

Not a public feast or banquet occurs in Homer, without mention of music and a bard. Even the gods themselves, on such occasions, are serenaded by the voice and lyre of Apollo, and the muses, as at the wedding of Peleus and Thetis, where the gods graced the occasion with their presence, and where Apollo acted as musician. For the honour of music, both Achilles and Paris are represented by Homer as performers on the lyre. The former sings to his harp, the deeds of heroes, and the latter, the amours of lovers. The delegates from Agamemnon found Achilles thus employed in his tent, after he had quitted the Grecian camp in disgust, at the conduct of Agamemnon. Of so much importance is music with Homer, that it has a place in four of the twelve compartments into which his description of the shield of Achilles has been divided by the critics; as, 1. A town in peace; 2. Shepherds playing on

reeds; 3. Song and dance, accompanied by the lyre, during the time of vintage; and 4. A Cretan dance.

Among the bards or rhapsodists immortalized by Homer, are *Tiresias*, *Thamyris*, *Demodocus*, and *Phemius*. Of these, *Tiresias* is the most ancient, and the most celebrated prophet in the Grecian annals. *Ulysses* is ordered by *Circe* to consult this musical seer in the shades. This bard is also made by *Sophocles* to act a venerable and capital part in the tragedy of *Œdipus*. He was also celebrated by *Callimachus*, and *Cicero*, in his book of divination, and by *Diodorus*, who makes his daughter *Daphne*, the priestess of *Delphi*, and represents her as endued, like her father, with the prophetic faculty, and a *Sibyl*. *Thamyris* is called by *Homer*, one who sings to the cithara, and has embellished the popular story, concerning his blindness, by his versification. Probably, as *Burney* thinks, the allegory of his blindness arose from his having injured his sight by too intense application to the study of music and poetry. The only difference, in the opinion of *Pausanias*, between the misfortune of *Thamyris* and that of *Homer*, was this, that *Thamyris* was wholly silenced by it. *Homer*, without being discouraged by it, continued his musical and poetical labours long after his blindness. *Thamyris* was said to have chiefly excelled in the composition of hymns; on which account, the fanciful *Plato* compares him with *Orpheus*, and as he makes the soul of the latter after death, to pass into that of a swan, so he makes the soul of the former to pass into that of a nightingale. In speaking of *Demodocus*, *Homer* has taken occasion to exalt the character of poet and musician to the summit of human glory. He also makes *Demodocus* sing and play by musical inspiration, which supernatural assistance, it has been observed, reconciles the song of the bard to human probability, and the story becomes credible when it is supposed to be related by a deity.

Then fir'd by all the muse, aloud he sings
The mighty deeds of demi-gods and kings,
Touch'd at the song, *Ulysses* straight resign'd
To soft affliction all his manly mind.
Odyssey, 60, 70, 79, 80.

Ulysses himself ascribes the song of *Demodocus* to immediate inspiration, and *Apollo* is made the god of the bards, because he is the god of prophecy, as well as of music. No circumstance, in fact, is neglected by *Homer*, that can give dignity and importance to his brother poet. He never moves without a herald, whether to the palace, or to the games; he sits on a silver studded throne, his golden lyre is hung up beside him, to be brought when necessary, he has a particular table assigned him, and a full bowl of generous wine set before him, to drink from as often as he had a mind. Nay, he has a distinguished seat at the regal board, and is helped by the hand of *Ulysses* to the first bit, the chine.

If the musicians and bards of these olden times were believed to be inspired, it is no wonder that they are represented as graced with such honours, as the favourites of *Apollo* and the muses. If music, as *Burney* wittily remarks, be degenerated in our days, the honours are likewise diminished, for though a vocal performer may acquire the trifling reward of 50 guineas a song, yet we rarely hear of one being seated at a king's table, or still less that any modern hero or general, however inferior in fame and merit to *Ulysses*, condescends to carve

for him. It is curious to find, that Demodocus, like his predecessors, Tiresias and Thamyris, and his successor Homer, was blind, and that this privation in ancient, as well as in modern times, seems somewhat characteristic of the professors of music and song.

Pheonius, the last bard mentioned by Homer, has had all due care of his character taken by Homer, who tells us, that he was pressed into the service of the suitors of Penelope; for eating, drinking, and singing, make up almost the chief part of the Odyssey, for whose amusement, he was compelled to exercise his talents, in the midst of riot and debauchery. The speech which Homer puts in the mouth of Pheonius, when deprecating the merited wrath of the avenging and injured Ulysses, is so beautiful an eulogium on music and poetry, that it deserves to be transcribed.

O king! to mercy be thy soul inclin'd,
And spare the rooks, ever gentle, kind!
A deed like this, thy future fame would wrong,
For dear to gods and men is sacred song.
Self-taught I sing; by heav'n, and heav'n alone,
The genuine seeds of poetry are sown;
And what the gods bestow, the lofty lay
To gods alone, and godlike worth we pay.
Save then the poet! and thyself reward—
'Tis thine to merit, mine is to record!

Respecting the word poet, here used, it is to be observed, that such a word does not occur in all the writings of Homer, nor was it known, either before, or during his lifetime. The word *αἰδός* here, and very frequently in Pope's translation, rendered poet, signifies *minstrel, bard, singer*. The Greek term *αἰδός* merely signifies, one who writes or makes verses, and has therefore a more limited signification than *αἰδός*, or bard, who not only made verses, and these extempore, but also sung them to the lyre or stringed instrument. They resembled the Celtic bards, and the Scandinavian scalds, the Troubadours of Provence and Languedoc, and the Dutch harpers. It was not till after the disjunction of music and poetry, that the term poet was used instead of *αἰδός*, or bard.

After the times of Homer, there is almost a total blank in literature, as far down as the time of Sappho; for though the names of several poets and musicians are mentioned between these periods, yet of their works only a few fragments remain. From the days of Sappho to those of Anacreon, a space of a century nearly, the case is the same, and between the poems of Anacreon and Pindar, is another chasm of nearly the same duration. After this is the epoch of the Greek tragedians, Æschylus, Sophocles, and Euripides, when the historic period of literature commenced. Respecting Hyagnis and Olympus, mentioned by our author, they belonged to the mythic or fabulous period of Grecian history, and do not therefore come within our present limits. Thaletas is the next poet musician after Homer and Hesiod, but we cannot pretend to fix precisely the time of his appearance on the stage of music. He is a great favourite with Plato and Plutarch. The former celebrates him for his captivating melody, and the latter ascribes to him many musical compositions and inventions, such as Pæans and new measures in verse, and rhythms in music, which he had acquired from the flute-playing of Olympus, whom at first he had imitated. According to Athenæus, the Spartans long continued to sing his airs; and according to the Scholiast on Pindar, he invented the Hy-

porchemes for the military dance. This was a species of poetry composed not only to be sung to the sound of flutes and citharas, but to be danced at the same time. The Italian term *ballata*, as Burney remarks, the French, *ballade*, and the English word, *ballad*, had formerly the same signification; namely, a song, whose melody was to regulate the time of a dance. The different measures of poetry being called feet, both in ancient and modern languages, suggests an idea, that dancing, if not anterior to poetry and music, had a very early and intimate connexion with both. The poet Simonides defined poetry an eloquent dance, and dancing, a silent poetry.

After Archilochus, mentioned by Rollin, flourished the celebrated Tyrteus, 685 years A. C. This Athenian general and musician is celebrated by all antiquity, for the composition of military songs and airs, as well as the performance of them. He was called to the assistance of the Spartans in the second war with the Messenians, and the victory which was then obtained over that brave and unfortunate people, is attributed to the animating sounds of a new military flute or clarion, invented and played upon at the time by him. For this victory, the Spartans gave him the freedom of their city, and his military airs were constantly sung and played in the Spartan army to the last hour of the republic. Lycurgus the orator, in his oration against Leocrates, says, that the Spartans made a law, that whenever they were in arms, and going out upon any military expedition, they should all be summoned first to the king's tent, to hear the songs of Tyrteus, as the best means of disposing them to die with pleasure for their country, when sent forth to the field of combat. He was also the author of a celebrated song and dance performed at festivals by three choirs, the first of which was composed of old men, the second of such as had arrived at manhood, and the third of boys. The first choir began with this verse:—

"In youth our souls with martial ardour glow'd."

The second:—

"We present glory seek—point out the road."

The third:—

"Though now with children we can only class,
We hope our future deeds will yours surpass."

Respecting Terpander, Burney places him 671 years A. C. in the 27th Olympiad, from the Oxford Marbles, which, in his opinion, are the best authority for fixing the epoch of this musician. Rollin in conformity to several authors, says, that he added three strings to the lyre, which before had but four. But this contradicts what was before said of Orpheus, who was also said, by Virgil, before quoted, and several Greek traditions preserved by historians, to have made the same addition. The probable solution of the difficulty is, that whereas in other parts of Greece, the lyre with seven strings had been long played, Terpander was the first performer that ventured to play on such lyres at Sparta. The Spartans had been deprived of all their natural feelings by the severe system of Lyeurgus, and were rendered mere machines, so that when Terpander dared to make an innovation on their ancient music, it gave great offence to this mechanical nation. It was a principle with them not to deviate

one hairbreadth from the customs and opinions of their fathers. They were completely, (if we may use such a phrase,) *an old light people*. The new strings, or new melodies and rhythms upon the old strings, were as intolerable to these old fashioned folks, as an organ and varied music would be to the most of our Scottish Presbyterian congregations, or to a Quaker meeting. It is not at all surprising (said Alcibiades sarcastically), that the Lacedæmonians seem fearless of death in the day of battle, since death would free them from those laws, which make them so miserable.¹ Life seems to have been rendered by these people one continued penance from beginning to end, by constantly counteracting nature in all her operations. They were a set of inveterate fanatics, equally enemies to comfort and elegance in their way of living. In this respect, no sect of modern times, however rigid and austere, could surpass them. Plutarch tells us of one of their kings; who, when a musician was highly extolled for his skill, said, how much you must admire a *brave man*, who can bestow such praise upon a harper. When a musician was recommended to this same *refined monarch*, as a man who composed excellent music, he said, turning to his cook, "and this man can make good broth." The military art was every thing with these narrow minded people. They had carried the art of killing their neighbours, and of defending themselves to great perfection, and could not be brought to think that any other accomplishment was necessary. But such music as they had, they wholly engrossed to themselves, and would not suffer their slaves to sing either the songs of Terpander or Alcanan. Some of the poor Helots being taken prisoners by the Thebans, when asked to sing the Spartan songs, replied, "we dare not sing them, they are the songs of our masters." The story of Terpander appeasing a sedition at Sparta, by the melody of his music, is difficult to reconcile with their former abhorrence of his musical inventions. We must either suppose that he had gradually refined their taste, or depraved his own to the level of his hearers. He was the first who invented a notation, for ascertaining and preserving melody, which before his time was traditional, and wholly dependant on memory. This invention of itself is sufficient to set the merit of Terpander above that of all former musicians.

The Olympian and the Pythian games were as famous for musical contests, as for those of wrestling and running. Even at Delos, in remote antiquity, musical games were celebrated, in which Homer himself seems to have performed.² At the Grecian games, the musical instruments employed, were trumpets, flutes, and lyres. Herodotus of Megara was the most famous trumpeter of antiquity, having gained the prize at this kind of music fifteen times. He was a man of gigantic size and enormous appetite, and his lungs were so powerful in blowing the trumpet, that he could not be heard with safety but at a great distance. But on these occasions, the danger was not confined to the hearers only. The performers themselves were in danger of blowing their last blast, and were thankful when they found themselves alive and well, when their *solos* were ended. Archias, the celebrated trumpeter of Hybla, dedicated a

statue to Apollo, in gratitude for his having been able to proclaim the Olympic games with his trumpet *three times*, without bursting his cheeks, or a blood vessel, though he sounded with all his force, and without a snuffle. Even the flute had its dangers. Lucian tells us with great gravity, that Harmonedes, a young flute-player, and scholar of Timotheus, at his first public performance, in order to *elevate and surprise*, commenced his solo with so violent a blast, that he *breathed his last breath into his flute*, and died upon the spot.

The separation of music from poetry took place at the Pythian games, at the close of the Crissæan war, 591 years before Christ, when the Amphictyonic council proposed prizes to those who played best on the flute alone without singing. Afterwards, at the 8th Pythiad, 559 years B. C., a crown was given to players on stringed instruments without singing, which was won by Agelaus of Tegea, as Sacadas was the first who had attained previously a similar prize for playing a solo on the flute. The road to fame by means of instrumental music alone was now open, and so successfully was it pursued, that Pythocritus of Sicyon gained the prize six successive times at Delphos, as the best flute performer.

The other musicians who came after Terpander, were Alcanan, Alcarns, Sappho, Mimnermus, Stesichorus, Simonides, and Bacchylides, who all united in their own persons the characters of the musician and the poet, but who are more known in the latter capacity than in the former. Pindar, the Theban poet, who flourished 520 years B. C., was the very best of the Grecian lyric poets, and an excellent player on the flute and cithara; but we read of no improvements which he made in the science of music. Respecting Phrynis, the story told by our author of his disgrace at Sparta, depends on the authority of Plutarch, who frequently applies the same anecdote and apophthegm to different persons. The decree quoted by Rollin from Boethius against Timotheus, only informs us, that a lyre with more than seven strings was not in use at Lacedæmon, but does not prove that the rest of Greece had confined their music within the compass of seven strings. It would appear also, that notwithstanding the former decree against Terpander, a lyre with seven strings had become common at Lacedæmon, whereas before, a lyre with only four strings had been in use there. The outcry against Timotheus was not confined to Sparta, however, if Plutarch, in his dialogue, may be believed, who gives us a list of the innovators who had corrupted and enervated the *good old melody*, by additional notes upon the flute and lyre. Lasus of Hermione, says he, by changing musical rhythms to the Dithyrambic irregularity of movement, and at the same time, emulating the compass and variety of the flute, occasioned a great revolution in the ancient music. Melanippides, in like manner, who succeeded him, would not confine himself to the old music any more than his scholar, Philoxenus, or Timotheus. The same thing also appears from the bitter invectives uttered by the comic poets at Athens, especially Aristophanes and Pherecrates, against these innovations, a specimen of which is given by Rollin from the former, in the case of Phrynis. This, says Burney, perhaps arose from envy, which the great reputation of new music had excited. The abuse of Timotheus, therefore, by these stage satirists, is perhaps the

¹ *Ælian*, lib. xiii. c. 28.

² See Homer's Hymn to Apollo, quoted by Theocritus.

greatest proof of his superiority. Timotheus, as appears from an epigram in Macrobius, received 1000 pieces of gold from the Ephesians, for composing a poem in honour of Diana, at the dedication of her temple, and this perhaps might be an additional reason why the comic poets railed at him. The comic poet Pherecrates introduced *music* on the stage, under the figure of a woman whose body was terribly torn and mangled. She is asked by *Justice*, under the figure of another female, the cause of her ill usage, to which she gives the following reply: "The first source of all my misfortunes was Melanippides, who began to enervate and debilitate me by his *twelve strings*. However, this would not have reduced me to the deplorable state in which you now see me, if Cinesias, that cursed Athenian, had not contributed to ruin and disfigure me in his Dithyrambic Strophes, by his false and untunable inflexions of voice. In short, his cruelty to me was beyond all description, and next to him, Phrynus took it into his head to abuse me by such divisions and flourishes, as none ever thought of before, making me subservient to all his whims, twisting and twining me a thousand ways, in order to produce from *five strings* the twelve different modes. But still the freaks of such a man would not have been sufficient to complete my ruin, for he was able to make me some amends. Nothing now was wanting, but the cruelty of one Timotheus, to send me to the grave, after maiming and mangling me in the most inhuman manner." "Who is this Timotheus?" says *Justice*.

MUSIC.

"O 'tis that vile Milesian blade
Who treats me like an arrant Jace,
Robs me of all my former fame,
And loads me with contempt and shame:
Contriving still where'er he goes,
New ways to multiply my woes:
Nay more, the wretch I never meet,
Be it in palace, house, or street,
But straight he strips off all my things,
And ties me with a dozen strings."

Burney, vol. i. p. 410.

When Phrynus is said in the above complaint of Music, to have produced from five strings the twelve different modes, it implies, in Burney's opinion, an instrument with a neck, by which the sounds of five strings only, were multiplied to all those of the twelve modes. It appears also from this fragment of Pherecrates, that Timotheus was not the first who used eleven strings, since Melanippides had previously used twelve strings on his lyre. The poetical and musical compositions of Timotheus were very numerous, according to Suidas, who ascribes to him nineteen nomes or songs, in Hexameters, thirty-six Proems or Preludes, eighteen Dithyrambics, twenty-one hymns, the poem in praise of Diana, one panegyric, three tragedies, the Persians, Phinidas, and Laertes, besides a fourth added by others, called Niobe, and a poem on the birth of Bacchus. Stephen of Byzantium makes him author of eighteen books of nomes, or airs, for the cithara, to 8000 verses, and of a thousand preludes for the nomes of the flute.

Music was in great request at Athens during the time of the republic, and poetical and musical contests were appointed at the Panathenæan festivals. Long before the days of Pericles, rhapsodists were appointed to sing the verses of Homer at these games, by Hipparchus the son of Pisistratus. Singers of the first class, accom-

panied by performers on the flute and cithara, exercised their talents here on subjects prescribed by the directors of these public exhibitions. In addition to these public musical contests, others were held in the *Odeum*, or music-room, a building erected by Pericles, that great patron of the arts, where poets and musicians daily exercised themselves in their respective arts, and rehearsed their compositions, previous to their exhibition on the stage. Playing on the flute, though at first esteemed a mean acquisition, became so common after the invasion and defeat of the Persians, that it was a disgrace to a person of rank or birth not to know how to play upon it. Callias and Critias, both Athenians, Archytas of Tarentum, Philolaus and Epaminondas, were all performers on the flute. Damon, a famous music-master at Athens, was the teacher of Pericles and Socrates in that art. Antigenides the son of a Theban flute-player, and himself one of the most celebrated musicians of Greece, was invited to Athens by Pericles, and appointed by him to instruct his nephew, Alcibiades, in flute-playing. Antigenides was the scholar of Philoxenus, a person equally celebrated for gluttony, flute-playing, and jesting. Aulus Gellius, however, tells us, in his *Noctes Atticæ*, from a book on music, composed by one Pamphila, that his scholar Alcibiades, setting up for a fine gentleman, and taking the utmost care of his person, was soon disgusted with the flute, as Minerva herself had been before; for happening to see himself in a mirror while he was playing, he was so shocked at the distortion of his sweet face, that he broke his instrument in a transport of passion, and threw it away, which brought the flute into great disgrace among the Athenian beaux. It was Antigenides, according to Athenæus, who played upon the flute at the nuptials of Iphicrates, a celebrated Athenian general, with the daughter of Cotys, king of Thrace; and it was he also, according to Plutarch, who so transported Alexander at a banquet, by his performance of the Harmatian air, that he seized his arms, and was on the point of attacking his guests. The same story has been told of Timotheus. The Spartans had a song, which said, that a good performer on the flute would make a man brave every danger, and face even iron itself. Stories precisely similar to that mentioned have been recorded of the Northern scalds.

Antigenides, though in high reputation as a musician, seemed to regard public favour as a precarious gale, and was never elated by the applause of the multitude; and was so fully persuaded of the coarseness of their taste, that hearing one day, at a distance, a violent burst of applause to a player on the flute, he said, "There must be something very bad in that man's performance, or those people would not be so lavish of their approbation." He made many innovations on the flute, by increasing the number of holes, and rendering its tones more flexible and various. Theophrastus, in his History of Plants, has told us, how and at what season Antigenides cut the reeds for his flute, differently from former players on that instrument, in order to have such as would express all the delicacy and refinements of his new music. Upon these he played in all modes, as the simple Æolian, the diversified Ionian, the plaintive Lydian, the sacred Phrygian, and the warlike Dorian. He was the first performer, who appeared in public with delicate Milesian slippers, and a saffron coloured robe, called *crocotus*.

Fronomus, another Theban, was noted also as a flute-player, and invented one on which he could play in three modes; whereas, before his time, there was a particular flute for every mode. Dorion, a native of the same country, was the contemporary and rival of Antigénides at Athens. According to a passage in the *Memorabilia* of Xenophon,¹ it was no uncommon thing for the Athenians to be divided into what we would denominate them, fiddling factions. Dorion is better known to posterity as a wit and a voluptuary, than as a musician, though an eminent practitioner. His wits and talents made amends for his gluttony, and he was a welcome guest, wherever he went. Supping one night with Nicocreon, in the island of Cyprus, and admiring a rich gold cup placed on the side-board; the goldsmith will make you just such another, says the prince, whenever you please. He will obey your orders much better than mine, Sir, said Dorion, so let me have that, and do you commission another. Athenæus remarks on this reply of Dorion, that he acted contrary to the proverb, respecting the Theban flute-players: *Crasso in aere nati*.

To flute-players, nature gave brains, there's no doubt,
But alas! 'tis in vain, for they soon blow them out.

Dempos, Lib. viii. p. 338.

On hearing the description of a tempest in the Nauplius of Timotheus, he said, he had seen a better in a boiling cauldron. Having lost a large shoe, at a banquet, which he wore because his foot was violently swelled by the gout: the only harm I wish the thief, said he, is, that my shoe may fit him. How great the demand for flutes then was, may be conceived from a circumstance mentioned by Plutarch, in his *Life of Isocrates*. This orator, says he, was the son of Theodorus, a flute-maker, who acquired wealth sufficient by his trade not only to educate his children in a liberal way, but also to bear one of the heaviest public burdens to which an Athenian citizen was liable, that of furnishing a chorus for his tribe or ward, at festivals and religious ceremonies. Each tribe at Athens, it must be remarked, furnished their distinct chorus, which consisted of a band of vocal and instrumental performers and dancers, who were to be hired, maintained and dressed during the whole time of the festival; an expense great in itself, but much increased by emulation among the richer citizens, and the disgrace consequent on an inferior exhibition. The wealth of Theodorus will not, however, appear wonderful, if the price of flutes be judged by that of Ismenias, the celebrated musician of Thebes; who, according to Lucian, gave three talents, or £381 : 5s. for a flute at Corinth. The flute-players of those times lived in a very magnificent and splendid manner, as we learn from the *Memorabilia* of Socrates. If, says Xenophon, a bad performer on the flute wishes to pass for a good one, how must he set about it? Why, he must imitate the great flute-players in all those things that are foreign to the art itself; and principally, as they are remarkable for spending great sums in rich furniture, and for appearing in public with a great retinue of servants, he must do the same. The extravagance and profusion of modern times, in the payment of theatrical musicians, is not to be compared to that of the

Athenians, during these days of musical mania. Amæbius the harper, whenever he sung and played on the stage, was paid an Attic talent, or £198 : 15s. a day for his performance, though he lived close by the theatre. In this extravagance the Athenians excelled the Romans themselves, as Roscius the celebrated actor got but £32 : 5 : 10d. a day for acting.

Other flute-players of note, were Clonas, Polymnestes and Telephanes, who was contemporary with Demosthenes. An epitaph in the Greek Anthology, upon Telephanes, compares his talents to those of the greatest names in antiquity.

There were also several noted flute-players of the female sex, and it is no wonder, that this instrument should be in favour with them, since a goddess invented it. One of the muses had it for her symbol, and these musical ladies the sirens were famed for their skill in playing it. The celebrated Lamia, the mistress of Demetrius, the son of Antigonus, and the greatest beauty of her age, was the best female player of antiquity. An exquisite engraving of her head upon an amethyst, with the veil and bandage of her profession, preserved in the French king's collection, authenticates, in some degree, the accounts of her beauty. Athenæus, that noted collector of antiquity, has recorded the names of a great many female flute-players, whose talents and beauty had captivated the hearts of many of the most illustrious personages in antiquity. Yet the use of the flute among females, must have been much more general in Persia, than in Greece; for Parmenio wrote word to Alexander, that he had taken at Damascus 329 concubines of the Persian monarch, who were all skilled in music, and performers on the flute and other instruments. After the conquest of Greece by Alexander the Great, but few eminent musicians appeared, so that this epoch may be said to close the history of Greek music.

Having brought down the history of the inventors and improvers of Greek music, to the time of Alexander the Great, when Greek music, both vocal and instrumental, had reached its highest perfection, and fixed the epoch, when poetry and music were disjoined, and practised as separate and distinct arts, it now remains to speak of the ancient Greek music, what it originally was, and of the various steps by which it rose from the grave and simple melody of early days, to its state of highest refinement and variety. Our author who is a great admirer of antiquity, is a strong advocate for the superior excellence of the primeval Greek music, to that which was used in the latter times of the Grecian republics, and pronounces the music then used, to be a corruption and depravation of the good old music of ancient days; such as those of Cadmus and Cecrops, of Amphion and Orpheus, of Homer and Hesiod. In this opinion, he follows the authority of Plutarch in his treatise on music, and of Plato, Aristotle, and other philosophers, who exclaimed against the musicians of their day, for having debauched the popular taste, by wanton and dissolute airs. From this doctrine of Rollin, however, fortified by such high authorities as those of philosophers, we must dissent, as perfectly contrary to the established order of things. All other arts and sciences have had their origin, progress, and perfection, rising gradually from rude beginnings, to comparative perfection; as poetry, painting, agriculture, architecture, sculpture, commerce, navigation, astronomy, geography,

¹ Lib. iv. c. 4.

medicine, &c.; and why should music be excluded from this natural and successive order? Are we to believe in the face of fact, and in opposition to the natural progress we see mankind make, in all other arts, subservient to human happiness and human improvement, that the reverse was the case with music, and that it was at its greatest pitch of perfection, when men were rude and barbarous? We may with safety conclude, that music, like every other art, rose with the gradual civilization of man, till it reached its acme, and then shared the same fate as other refined arts, which declined apace, with the falling fortunes of Greece and Rome. In this part of the subject, we adopt the sentiments of Dr. Burney, a professed amateur and practitioner of this art, who devoted a long and laborious life to the investigation of the origin and progress of music, in preference to those of Plutarch and Rollin, as we cannot but think him a much better judge of the matter than either of these gentlemen.

What ancient music really was, is impossible precisely to determine; but of this we are certain, that it was something with which mankind were extremely delighted. This is indeed almost all we know of the matter. A vast deal has been said and written about ancient music, but very little to the purpose. We have only obtained words without things. It is not with ancient music, as with ancient architecture, sculpture, and poetry, of all which preserved specimens have reached our times, and which we can compare with modern, and consequently be enabled to pass a judgment in their favour, or the reverse. No specimens of ancient music have come down to posterity;—no scientific treatises on the subject with accompanying tables, keys or diagrams, to enable us to compare Greek or Roman music, with that of the moderns. We have a vast number of technical terms of ancient music, employed by such Greek authors as have either wrote its history, or occasionally adverted to it, of their own music, but they are almost perfectly unintelligible, even to professed adepts in the Greek language. We shall not therefore trouble general readers, with conjectures upon the tablature of Greek music. Those who are curious about this subject, may consult Dr. Burney's first section.

The Greek musical tablature or gamut was exceedingly complex and difficult to a learner. Their most extensive scale of music did not exceed two octaves or sixteen sounds, and the 24 letters of their alphabet were more than sufficient to express them; for their music being only a notation of their poetry, the rhythm or air must have been determined by the measure of the verses, without the assistance of signs of proportion, peculiar to music. But even supposing that different characters were necessary to determine the different feet of the verse, it is certain, that vocal music was in no need of them, and as instrumental music was nothing more than vocal music, sounded by instruments, it likewise had no need of them, when the words were written, or the performer had them numeriter. However, in order to multiply these characters, the alphabetical letters were written sometimes in capitals, and sometimes small, some were entire, some mutilated, some doubled, and some lengthened, and besides these distinctions in the forms of the letters, others of situation were used, sometimes turning to the right, and sometimes to the left, sometimes inverting, and sometimes placing them horizon-

tally. As, for instance, the letter *gamma*, by these expedients, served to express seven different sounds. Some of the letters also were barred or accented, in order to change their symbolical import, and these still not sufficing, they made the common grave and acute accents serve as specific musical notes. Then recourse was had to accents, as the scale became more extended, in order to express the number of characters. These various modifications of letters and accents in the Greek notation, composed in all, 120 characters, which were still more multiplied in practice, till the whole number, both for the vocal and instrumental tablature, amounted to 1620 musical characters, when the Greek musical notation had arrived at its maximum. This multiplicity of notes rendered it a very difficult and laborious task to a musical student, even at a time when the art itself was in reality very simple. Hence Plato, though unwilling that too much time should be spent in learning music, yet allowed the youth to sacrifice three years' study to it, merely in learning the elements; being, as he thought, the shortest possible time. But at the end of this time, even a learner could hardly be capable of naming all the notes, and of singing an air *at sight* as we call it, in all keys and in all the genera, accompanying himself, at the same time upon the lyre, much less could it be expected, that he should be correct in every species of rhythm, be master of taste and expression, or be able to compose a melody himself, to a new lyric poem. From such a gamut as this, it would be much more difficult to sing, than to follow a voice or instrument, just in the same way that it is far more perplexing to read the Chinese language, than to speak it, from its multiplicity of characters. However, if Greek music could now be really found, we should be able to read it, because the notation is not utterly lost. But though it could be deciphered as exactly as the Greeks themselves could have done, yet to divide it into phrases, to accentuate and to give it the original and true expression, are things now impossible, and ever will remain so. It is with music, as with language, to read it with the eye, and to pronounce are quite different things, and we can arrive at no greater certainty how to sing dead music, than how to pronounce a dead language.

The olden harmonic seems to have been the most ancient music of the Greeks, and was just the Diatonic, without the diesis, or the quarter tone. Our author, after Burette, has confounded the olden harmonic with the new, for the former had none of the characteristics of the genera. The new harmonic was distinguished from the old by the admission of the diesis or quarter tone, whereby the semitone was divided into two halves. Burney is of opinion, that the Dorian mode, in which Olympus composed his melodies, had a very close resemblance to the old Scots music, and an old Chinese scale of six notes, preserved in Rameau, according to that author's interpretation, is completely identical with the Scots scale. A specimen of Chinese music given in Du Halde, confirms Rameau's interpretation, for nothing can be more Scottish than the whole cast of the air. Twelve Chinese airs, brought from China by Dr. Russel, the natural historian of Aleppo, confirm what has been said of its conformity to the Dorian melodies, played by Olympus, as they all want semitones, and by the omission of

the 4th and 7th notes of the key, bear a strong resemblance to Scottish airs. In fact, the Diatonic, or Spontaneous melodies, were just their harmonic, without the quarter-tone. Dr. Lind, an excellent judge of music, and who resided several years in China, assured Burney, that all the melodies he heard there, bore a strong resemblance to the old Scots tunes. The octave, produced by missing the third note downwards, in two tetrachords, as the second was missed in the inharmonic of Olympus, gives exactly the Chinese scale of the Abbe Roussier. There is nothing that gives a stronger effect, as the Greeks called it, to a melody, than the constant or usual omission of particular notes in the scale. The general fact, that those old musical composers of the ancient genuine melody, as Olympus and others, which Plato, Aristotle, and all the ancient writers speak of, as so excellent and superior to the more modern, delighted to break the diatonic progression, or stride over certain notes in the melody, seems pretty clear, and surely renders it highly probable, that the cast of the old national Greek airs, was much like that of the old Scots music. The Chinese scale, as has been already said, is very Scottish. There is no necessity, however, for supposing, from the conformity of old Greek music to that of China and Scotland, that either of the two latter borrowed their music from Greece, or that Greece borrowed hers from China. That the Chinese have been long a stationary people, extremely tenacious of old customs, and equally averse to novelty as the ancient Egyptians, favours the notion of the high antiquity of this simple music, and as there is reason to believe it very like that of the most ancient Greek melodies, it is easy to suppose it to be a species of music that is natural to a people of simple manners, during the infancy of civilization and arts.² Like most other nations, the Greeks were long in a state of rude and savage ignorance, and the music would be like the people, poor and simple. As language in an infant state of society has but few words, because people in that condition have but few ideas, so it would be with their music; it could neither have many notes, nor much variety, and would be chiefly of the warlike and mournful kind.

Respecting the Melopoeia, or the arrangement of such sounds as were fit to be sung, we have only a few general rules, such as that an air or piece of melody should be composed in some genus or kind, and be chiefly confined to the sound of some mode or key, of which modes the Greeks had thirteen, which were afterwards reduced to seven, by Ptolemy. Respecting the succession of these sounds in the course of the air, that was in general confined to four species of intonation or intervals, specified by Euclid, in his Harmonic Introduction; but this regular succession of sounds constituted nothing more than the mere body of melody, which could only be animated or vivified by the assistance of rhythm or measure. What the ancients meant by harmony, was merely the succession of simple sounds, according to their scale, with respect to acuteness, or gravity. The melody of the ancients was the succession of these harmonical sounds, according to the laws of rhythm and metre, or in other words, according to time, measure, and cadence. Consequently, harmony, or the succession of combined sounds or chords, according to the laws of coun-

terpoint, was unknown to the ancients, which with them meant mere melody, as distinct from modulated air. The modulation of the ancients was merely the change of sounds in singing, and which amounted to four; as rising, falling, repeating the same sound to different words, and prolonging a musical sound. From the strict union of poetry and music among the ancients, time or rhythm was the great regulator of the latter. An offence against rhythm was an unpardonable offence in a performer, as it not only destroyed the beauty of the poetry, but sometimes even the meaning of the words of which it was composed. Rhythm, say the Greeks, was the *res*, or every thing with the musicians; as without it, melody was regarded as wholly unmeaning and lifeless. Hence, Plato refused the name of musician to all who were not perfectly versed in rhythm, as we should now do to a bad timeist. It is of such importance, that without it, music can have no power over the human passions. Hence Pythagoras, according to Martianus Capella, called rhythm in music the male, and melos, or melody, the female; and Isaac Vossius in his dissertation, de Poematum Cantu et Viribus Rhythmici, has attributed to rhythm all the miraculous powers of ancient music.

The music of the Greeks was constantly sung to verses, the words of which were all composed of long and short syllables, a long syllable being equal to what we call a semibreve, and the short a minim in modern music. The verses thus sung consisted of a certain number of feet, formed by the different combinations of long and short syllables. By these feet was the rhythm of the melody regulated, as whatever was their length, they were always divided into two parts, equal or unequal, the first of which was called *elevation*, and the second *depression*. In like manner, the *rhythm* of the melody, corresponding to these feet, was similarly divided into two parts, equal or unequal, which are now called the *up* and *down* parts of a bar, expressed by *beating down* the hand or foot, and *lifting it up*. This was vocal rhythm. It was easy for musicians to sing these, as the notes were marked over each syllable of the verses that were to be sung, the quantity of each syllable was perfectly known to them, and the duration of each sound was regulated by the syllables. In instrumental music, for the convenience and ease of the performer, a canon or rule was given of the rhythm at the beginning of a lyric poem. This simply consisted of the numbers one and two, or the alpha and beta of the Greek alphabet, disposed according to the *shorts* and *longs* which composed each verse, and divided according to the number of its feet. The alpha or unit marked a *breve* or *short*, because it contained only one portion of time, and the beta, or two, marked a *long*, because it was equal to two portions of time. In Latin, rhythm was called *numerus*, and this term became extended in process of time to the *melody* itself, subjected to certain numbers or rhythms. Hence, says Lycidas to Moeris in Virgil's 9th Eclogue, ver. 45. "*numeros memini, se verba tenerem.*" If I knew the words, I should remember the tune well enough.

The Romans had signs for rhythm as well as the Greeks, and these were not only called *numerus*, but *era*; that is, *number* or the mark for time: *numera nota* or mark the measure, says Nonius Marcellus. The word *era*, not only signified the time or measure of the tune, but was also subsequently applied to the tune or melody

² See Burney, vol. i. p. 38—41.

itself. From this word came the Italian term *aria*, and from thence our term *air*, a certain piece of music of a specific measure. To make their music more sensible in the execution, time was beat by the motion of the feet, up and down alternately, according to what we call treble or common time. To regulate this, was generally the office of the music master or director, called *Mesochorus* and *Coryphæus*, because he was placed in the centre of the orchestra among the musicians, in a lofty and conspicuous station, that he might be seen and heard more easily by the whole band. These regulators of the time were called in Greek *podyktypoi* and *podopsopoi*, and in Latin, *pedarii*, *podarii*, and *pedicularii*, from the noise of their feet, which were furnished with wooden or iron sandals, that they might mark time more distinctly. Another mode of marking time was, by beating with all the fingers of the right hand upon the hollow of the left, and he who thus marked the rhythm was called the *manuductor*. Sometimes they used oyster shells and the shells of other fish, as well as the bones of animals, for the same purpose. "What a barbarous and noisy music," exclaims Burney, "all rhythm and no sound. The drums and sistrams of the Idæi Dactyli could not have been more savage."

Many ancient instruments were monotonous and of little use, but to mark the measure. Such were the *cymbalum* and *sistrum*. It is strange that the ancient musicians should have needed so much noise and parade to make them keep time. The more time is beat, says Rousseau, the less it is kept; and in general, bad music and bad musicians stand most in need of such noisy assistance. If any thing, therefore, can be credited of the power of ancient music over the passions, it must have arisen chiefly from the energy and accentuation of the rhythm. However ignorant we may be of the melody of ancient music, the rhythm or time of that melody being entirely regulated by the metrical feet, must always be as well known to us, as the prosody and construction of the verse. We have, therefore, nothing else to do but to apply to the long and short syllables any two notes, one of which is double the length of the other; in order to know as exactly as if we heard, in what manner any particular kind of metre was set by the ancients, with respect to time and cadence, that boasted rhythm, which we are so often told, was every thing in their music. Their most ancient metres were Hexameters and Iambics, the former consisting of six feet, and composed of dactyls and spondees. A dactyl contains a long and two short syllables, a spondee two long syllables. The two last feet of each Hexameter line are a dactyl and a spondee. Iambic verses were composed of six feet, each containing a short and a long syllable. A reader acquainted with the prosodial marks of Hexameter and Iambic verses, could easily ascertain the measure or time of the melody, by inspecting them and reading them agreeably to the laws of prosody. In the Hexameters of Homer and Virgil, the sound and measure are frequently and manifestly made an echo to the sense. Homer, in describing the slow and painful toil of Sisyphus in rolling the stone up hill, uses laborious spondees, and then, when describing its swift descent down hill, he uses nimble dactyls.

Ανδρὶς ταῖντα πιδόειδε κλισίῃντο λαῶς ἀσπίδων.

With many a weary step, and many a groan,
Up the high hill he heaves a huge round stone;

The huge round stone, resulting with a bound,
Thunders impetuous down, and smokes along the ground.
Odyssey, B. xi. ver. 755—58.

In the viii. *Æneid*, ver. 596, Virgil describes in pure dactyls, the galloping of the horse.

—It clamor, et agmine facto,
Quadrupedante putrem sonitu quatit ungula campum.

As the measure of the verse, therefore, regulated entirely that of the melody, a music formed and moulded upon such a model, where the time was perpetually changing, by the mixture of unequal feet, especially in Hexameters, could not but be poor, cramped, and capricious, compared with that free unshackled variety, that independent range of rhythmical phrase, which constitutes so great a part of the riches of modern poetry. In the ancient pure and uncorrupted Iambics, the musical measure would correspond to a semibreve and minim alternately throughout, which was certainly very simple melody. But the mixture of *unequal feet*, and the Dithyrambic license of lyric poetry, were refinements of a later age, though they varied the measure, and freed it from the tiresome and insipid uniformity of ancient Iambics. Yet, as Burney remarks, it is difficult to conceive how such a music could be rigorously executed, without throwing both hearers and performers into convulsions.

The only collection of the ancient melodies are three hymns, supposed to have been written by a Greek poet, named Dionysius. These are the hymns mentioned by our author, and published, as he says, by M. Burette, with the ancient and modern notes, in 1720, from a copy found at the end of a Greek manuscript in the Royal Library at Paris, No. 3221. These hymns have been given by Dr. Burney, in the original Greek, with a poetical translation, as also with the Greek musical characters over the words, together with the same music in equivalent modern notes.

HYMN TO THE MUSE CALLIOPE.

O MUSE, beloved! Calliope divine,
The first in rank among the tuneful nine,
Guide thou my hand and voice, and let my lyre
Re-echo back the notes, thy strains inspire.

And thou, great leader of the sacred band,
Latona's son, at whose sublime command
The spheres are tun'd, whom gods and men declare
Sov'reign of song, propitious hear my pray'r.

HYMN TO APOLLO.

Through nature's wide domain,
Let solemn silence reign;
Let all the mountains, hills, and floods,
The earth, the sea, the winds, and woods,
The echoes and the feather'd throng,
Forebear to move or tune their song.

Behold the Lord of light,
Begins to bless our sight;
Phœbus, whose voice divinely clear,
E'en Jove himself delights to hear;
Great father of the bright ey'd moon,
Whose shoulders golden locks adorn.

Swift through the azure sky,
O let thy coursers fly;
And with them draw that radiant car,
Which spreads thy splendid rays afar,
Filling all space at thy desire,
With torrents of immortal fire.

For thee, serene advance
The spheres, in solemn dance,
For ever singing, as they move
Around the sacred throne of Jove;
Songs accordant to thy lyre,
While all the heav'nly host admire.

And when the God of day,
Withdraws his golden ray;
Do thou, sweet Cynthia, bless our sight
With thy mild beams, and silver light,
Oh! spread thy snowy mantle round,
And wrap the world in peace profound.

HYMN TO NEMESIS

Avenging Nemesis of rapid wing,
Goddess of eye severe, thy praise we sing;
Against thy influence, ruler of our lives,
Daughter of justice, man but vainly strives
'Tis thine to check with adamantine rein
The pride of mortals, and their wishes vain;
Of insolence to blunt the lifted dart,
And drive black envy from the canker'd heart.

Still at the pleasure of thy restless wheel,
Whose track the fates from human eyes conceal,
Our fortune turns; and in life's toilsome race
'Tis thine, invisible, our steps to trace;
To strew with thorns, or flow'rs, the doubtful mare,
And by thy rule to circumscribe our days.

Insulting tyrant, at thy stern decree,
Bow the proud head, and bend the stubborn knee:
Inflexible to each unjust demand
Frowning thou hold'st thy scales with steady hand.
Incorruptible judge! whom nought can move,
Nor less infallible than mighty Jove;
Great guardian! ever watchful, ever near,
O sacred minister of justice, hear!

Avenging Nemesis of rapid wing,
Goddess of eye severe, thy praise we sing.
And let Astraea, thy companion, share
Our pious praises, and our fervent pray'r.
She mounts the skies, or plunges into hell
With rapid flight, the deeds of man to tell;
Dread justice! whose report has pow'r to assuage
The wrath of gods, and calm infernal rage.

This last hymn to Nemesis, was sung in the time of Synethius a father of the church, who flourished 412 years after Christ, to the sound of the lyre, and three verses of it are quoted by that father, in his 95th letter. It is true, as our author remarks, that very little is known of this Dionysius, as not less than 14 Greek poets bore that name. M. Burette supposes the author of these hymns to be more ancient than Dionysius of Thebes, the music master of Epaminondas the celebrated Theban general. If so, the hymns to Calliope and Apollo are of the highest antiquity, and it is Burette's opinion, that the music of these hymns, is nearly as ancient as the hymns themselves. Of the 15 sounds in the ancient system of music, only 10 are employed in the melody set to these hymns, and these are the 10 lowest, according to the modern method of reckoning. The notes expressing these sounds are 11 in number, because two of them, *gamma* and *epsilon*, serve to express the same sound in two different relations. In the Oxford edition of the first hymn, five notes were wanting, which have been supplied from the manuscript which Burette used. These three hymns were sung in the Lydian mode of the Diatonic genus. This discovery was made by comparing the notes with those given by Alypius, in his catalogue of the characters used in that

mode; which, in counting from the bottom, was the tenth among the fifteen ancient modes. Dr. Burney is of opinion, that the measure of the melodies of these hymns was common time, in opposition to Burette, who makes the measure treble time. He tried these melodies in every key, and in every measure that the feet of the verses would allow; nay, even inverted the order of the notes, as it was the opinion of some, that the Greek scale and music should be read from right to left like Hebrew, but was wholly unable in any, or all of these modes, to augment their grace and elegance. "With all the advantages of modern notes and modern measure," says Burney, "if I had been told that these melodies had come from the Hottentots or Cherokees, I should not have been surprised at their excellence. There is music that all mankind, in civilized countries, would allow to be good, but these fragments are certainly not of that sort, for with all the light that can be thrown upon them, they have still but a rude and inelegant appearance, and seem wholly unworthy of so ingenious, refined, and sentimental a people as the Greeks; especially, if we subscribe to the high antiquity of the hymns to Calliope and Apollo, which makes them productions of that age, when arts and sciences had arrived in Greece, to their greatest perfection. The most charitable supposition that can be made respecting these melodies is, that the Greek language being in itself musical, wanted less assistance from sound than one that was more harsh and rough, and music being still a slave to poetry, and wholly governed by its feet, derived all its merit and effects from the excellence of the verse and sweetness of the voice that sung or rather recited it. But, as music, there needs no other proof of the poverty of ancient melody, than its being confined to long and short syllables. We have some airs of the most graceful and pleasing kind, which will suit no arrangement of syllables to be found in poetical numbers ancient or modern; and which, it is impossible to express by mere syllables in any language, with which I am at all acquainted." Such is Dr. Burney's opinion of these specimens of ancient Greek music.

Another specimen of Greek music was found in the manuscripts of the monastery of St. Salvador, near Messina in Sicily, and is mentioned by father Kircher, in his *Musurgia*, p. 542. fol. Rome, 1650. It was examined by M. Burette, and found to consist of a fragment of an Ode of Pindar, set to music, containing eight verses of that Ode. The musical notes set over them are in the Lydian mode. The four first have a melody set for one or many voices, the latter four have a different melody, at the beginning of which were the following Greek words, *χορος ος κιθαρας*, chorus sung to the cithara, and over the words of each verse are written the characters peculiar to instrumental music; which shows, that the second melody was not only vocal, but accompanied by one or more citharas, that played in unisons or octaves to the voice. The melody of these verses is extremely simple, and composed of only six different sounds, which is a cogent proof of the antiquity of the music, since the lyre of seven strings had more notes than were sufficient for its execution. Burney remarks, that by reducing this melody to regular time, whether triple or common, and setting a bass, which it is very capable of receiving, it will have the appearance and effect of a religious hymn of the present century.

PART OF THE FIRST PYTHIAN ODE.

Hail, golden lyre! whose heav'n invented string,
To Phoebus and the black hair'd nine belongs;
Who in sweet chorus round their tuneful king,
Mix with thy sounding chords their sacred songs.
The dance, gay queen of pleasure, these attends;
Thy jocund strains her list'ning feet inspire:
And each melodious tongue its voice suspends,
Till thou, great leader of the heav'nly quire,
With wanton art preluding giv'st the sign—
Swells the full concert then with harmony divine.

West's Pindar, vol. i. p. 84.

These are all the specimens of Greek melodies that have come down to us.

It has been much and ably disputed, whether the ancients knew *counterpoint*, or the art of singing in different parts or modes, as bass, treble, tenor, and counter, at the same time or together. Our author is very modest and candid on this point, and does not pretend to settle the question, either as to the use of counterpoint, or whether the ancient music was preferable to that of the moderns. It is evident, however, from the whole of his tone and manner, that he inclines to think that the ancients knew counterpoint, and that they carried music to as great perfection, as they did the arts of architecture, sculpture, and poetry. His argument in favour of ancient music, given in the mode of query, is entirely analogical, and has been often advanced, and as repeatedly answered. He speaks of concerts of vocal and instrumental music at Athens, and asks, if these Attic ears, so refined, and exquisitely sensitive, respecting the sound of words in common discourse, were less so respecting these concerts. Undoubtedly they were not. But the question is, what were Athenian concerts? Were they the same as our modern concerts, where, unless a solo be sung, counterpoint is invariably used, both in the vocal and instrumental parts. This is the point to be proved, and till it be proved that the ancient Greek concerts were exactly of the same kind as modern concerts, nothing is proved. The illusion lies wholly in the use of the term concert, as conveying the same idea, when applied to the Greek, as it does to modern music. In their vocal and instrumental concerts, symphony and harmony were all that were attended to, or the union of many harmonious sounds in concert, whether of the lyre or the voice, or both together. The word *harmony* with the Greeks, meant the well ordered arrangement and succession of single sounds, and not the union or simultaneous use of them, according to the laws of counterpoint, which constitutes *modern harmony*. The Greeks, therefore, in their concerts, or choruses, sung and played either in *unison* or *homophony*, or in octaves, which was called antiphony. Great weight has been laid on this latter term, by the adorers of the ancients, to prove that they were acquainted with counterpoint; because, in its grammatical sense, antiphony means sound opposed to sound, and therefore, that bass was used in opposition to tenor. But this proves too much, and therefore, proves nothing; for it may be applied to the opposition of male and female voices, though singing in consonance; and in the Romish church, antiphony means response, as when the congregation answers the priest, or in chanting, when each side of the choir sing verse for verse alternately. Aristotle defines antiphony to be consonance in the octave, and adds, that it results from the mixture of the voices of boys and men. The same philosopher,

after asking why antiphony is more agreeable than homophony, assigns the following reason; that in antiphony the voices (of boys and men) are distinctly heard, whereas in unison they are often so confounded that one absorbs the other. Boys and women naturally sing an octave higher than a man, at the same time that they think they are singing in unison. In this way antiphony may very well consist with symphony, because boys and women in singing with men, sing the same melody in two different modes. If it be considered that the Greeks made their music wholly subservient to their prosody, and that this prosody was fixed by immutable laws, and that the musicians were compelled to preserve rigorously in their music the quantity of syllables, we need not wonder that Attic ears were quite alive to any mistakes the singer might commit in the length and shortness of the syllables, or of the notes, governed as these were by the prosody of the syllables. It was merely refined sensibility as to the rhythm or measure of the melody, and has nothing to do with counterpoint. Amongst all the treatises that have descended to us respecting music, not a single rule with respect to parts in composition is to be found. The authors of these works, after promising at the beginning to speak of every thing concerning music, separate the heads of their work, which they all divide into seven articles: sounds, intervals, systems, genera, tones or keys, mutations, and melody, which, with rhythm or time, constituted the whole art and extent of their practical music. Is there the least probability that if such an essential part of music as counterpoint had been known, that they would have omitted it in their didactic writings concerning music? Dr. Burney, after stating at great length, and with great candour, all the arguments on both sides of the question, and ranging the rival combatants on both sides down to Rousseau, declares absolutely his conviction that the ancients were ignorant of counterpoint. "I will venture," says he, "to say, that the ancients never did use *simultaneous* harmony, that is, music in different parts." It has been urged frequently, and with great appearance of reason, that it is impossible to suppose that a people so highly refined as the Greeks, who brought the elegant arts and abstract sciences to such perfection that in the one class they have not been equalled and in the other seldom surpassed, should yet have been delighted with a rude, coarse, and ordinary music, and never have known counterpoint. To this it may be replied, that let any one improvement in an art, or single wheel in a watch, be stopped, all the rest will be checked. It was a law with the ancients to regulate their melody by the length and number of syllables, or, in other words, their music by their poetry. Whatever, therefore, injured the latter, by distracting the attention from it and rendering it difficult to be understood, was avoided, and, therefore, the multiplicity of concords in simple counterpoint, and the contrary motion of parts in sounds of different lengths in more florid compositions, could not fail of being held in utter abhorrence. It is also generally allowed, that the ecclesiastical musical modes and *Canto Fermo* of the Romish church, are remains of the ancient Greek music; and as these have ever been written in manuscript missals without parts, and been always chanted in *unison* and *octaves*, it is a strong presumptive proof, among others, that the ancients never had counterpoint, as this species

of music is so slow and simple, as to be more capable of receiving, and even to stand more in need of different parts being sung in harmony, than any other. But allowing that the Greeks were ignorant of counterpoint, it does not follow that their simple melodies had not the power of pleasing. Nay, some musical amateurs go so far as to declare that melody is the soul of music, and that what in modern times is called *harmony* or counterpoint is so far from being necessary to aid melody, that it destroys it. Amongst these is the paradoxical Rousseau, who having declared, in his Musical Dictionary, on the article Counterpoint, that the ancients had not the smallest idea of it, observes farther, in the article Harmony: "When we reflect, that of all the people on the globe, none are without music and melody, yet the Europeans only have harmony and chords, and find their mixture agreeable: when we reflect how many ages the world has endured without any of the nations who have cultivated the polite arts knowing this *harmony*; that no animal, no bird, or being in nature, produces any other sound than *unison*, or other music than mere melody; that neither the oriental languages, so sonorous and musical, nor the ears of the Greeks, endowed with so much delicacy and sensibility, and cultivated with so much art, ever led that enthusiastic and voluptuous people to the discovery of our *harmony*; that their music, without it, had such prodigious effects, and ours such feeble ones with it; in short," continues he, "when we think of its being reserved for a northern people, whose coarse and obtuse organs are more touched with the *force* and *noise* of voices, than with the sweetness of accents, and melody of inflexions, to make this great discovery, and to build all the principles and rules of the art upon it; when we reflect upon all this, it is hard to avoid suspecting that all our *harmony*, of which we are so vain, is only a Gothic and barbarous invention, which we should never have thought of, if we had been more sensible to the real beauties of the art, and to music that is truly natural and affecting." According to this gentleman and others, therefore, the Greeks not only had not counterpoint, but even would not have considered it an improvement. Burney himself, though a favourer of counterpoint, confesses, that stripping their music of counterpoint does not take from it the power of pleasing, or of producing great effects, and that the closes of great singers, made wholly without accompaniment, are more attended to than all the contrivance of complicated parts in the course of the airs which they terminate. An elegant and graceful melody, exquisitely sung by a fine voice (such as that of Madam Catalani), is sure to engage attention and create delight, without the accompaniment of counterpoint, and the less the latter is heard the better.

So intimately was Greek music connected with poetry, that although Greece had many musicians who were not poets, she had not one poet who was not a musician, and did not compose the music of his own pieces. *Musici qui erant quondam iedem poeta*, says Cicero. This is a proof of the simplicity of their music, for if the complicated system of modern music be considered, it is impossible both to be a great poet and great musician—such a union has never taken place in modern times. During the time of their education, the Greeks had no other language but their own to study, hence they had more leisure for other pursuits. In modern

times the case is quite the reverse, for the study of modern music requires too much time for a man of letters to qualify himself for a musical composer. The Abbe Grævina says, that the Grecian sage was at once a philosopher, a poet, and a musician, and laments that this is no longer the case. In separating these characters, says he, they have been all weakened, the sphere of philosophy has been contracted, ideas have failed in poetry, and force and energy in song. Truth is now extinguished from among men; the philosopher no longer speaks through the medium of poetry, nor is poetry any more heard through the vehicle of melody. This is rant not reason, as the reverse is the truth. It is with the arts as with the subdivision of labour; by being separated, each receives a degree of cultivation which fortifies and renders it more powerful, if not more illustrious. The music of ancient philosophers, says Burney, wittily, and the philosophy of modern musicians, I take to be pretty equal in excellence.

Wonderful effects have been attributed to ancient music, in humanizing savages, exciting or repressing the passions, and in curing diseases. The admirers of ancient music have expatiated much on this theme, and amongst these our author. According to them, nothing like Greek music has ever been heard or sung in any age or country, and the stories gravely told of its wonderful, nay, supernatural effects, by the philosophers of Greece and Rome, would fill a volume. Isaac Vossius, in his *Treatise de Poematum Cantu et Viribus Rhythmical*, avows his entire belief of all these, and will not allow his readers to doubt of a single circumstance, be it ever so marvellous, respecting the perfection and power of ancient music. To humanize savages, build cities, surround them with walls, assemble or dismiss the people, celebrate the praises of gods and men, govern fleets and armies, perform the functions of peace and war, and temper human passions, were, with him, the original offices of music; in short, says he, ancient Greece was wholly ruled by the lyre. No man of sense and reflection, however, unless besotted with admiration of every thing ancient, can possibly believe the wonderful stories related of ancient music. Most of these stories were originally the fruits of poetical invention, and mythological allegory. The nearer a people are to a state of nature, their music is proportionally more rude and simple, and their feelings more easily roused or soothed. The most of these wonders are said to have happened in the infant state of Greece and Greek music, and equally wonderful feats have been recorded of the music of the northern Scalds, the Highland Shannachies, and the Welch harpers, in agitating or soothing the passions. The martial sound of the bagpipe, if not now, was at least, till very lately, as powerful in rousing the warlike energies of a Scotch Highlander to deeds of heroism, as the flute of Tyrtæus, or the lyre of Terpander. Yet the sound of that instrument is pleasing to none but a Highlander. The stories of the medicinal virtues of music, as that of curing fevers by song, and of Asclepiades curing deafness by the sound of a trumpet, are highly ridiculous. Wonderful, indeed, as Burney remarks, that the same noise which would occasion deafness in some, should be a specific for it in others. But credulity must be very great in those who can believe that the pestilence could be driven away by music. That music has been occasionally useful in alleviating mental and nervous disorders, is a

fact not to be denied, as in the case of David, who soothed the malady of Saul by the music of his harp; and examples of its power in such cases, in modern times, have been produced. That music was a specific for the cure of the viper, is asserted by Theophrastus and Democritus, on whose authority Aulus Gellius rests his belief of the fact. The American savages themselves pretend to cure similar maladies by the noise and jargon of their rude music. The story of the cure of the bite of the Tarantula, performed by music, produced by our author as a pregnant proof of the power of music over diseases, is as wonderful as that of the cure of the viper's bite. M. Burette, with our Dr. Mead, Baglivi, and all the learned of their time throughout Europe, had no sort of doubt respecting the fact as related by Rollin. It is no wonder, therefore, that he should believe and quote the story as authentic. But philosophers and curious observers have since found it to be built on fraud and fallacy.¹

The stories of *singing swans* and *intelligent grasshoppers*, may be safely dismissed as foolish fables. Yet Strabo, Diodorus Siculus, Pliny, and Pausanias, gravely relate the story of a grasshopper supplying the place of a broken string in the musical contest between Eunomes and Ariston at the Pythian games. The story of Arion, carried on the back of a dolphin from Tarentum to Tenarus in the Peloponnesus, is beyond all power of belief, yet it is gravely related by Herodotus in his history, on the reports of the *Corinthians* and *Lesbians*. Dolphins seem at all times, according to the ancients, to have had a great attachment to man, but especially to poets and musicians, though they appear to have lost it in modern times.

Dr. Burney, after quoting and considering all the proofs of the *supernatural* effects of ancient music on men and animals, declares, that he has not been able to discover any superiority in ancient music, except its simplicity and strict adherence to metrical feet, when applied to poetry. It was when music became a distinct art from poetry, and when the choruses, which till then had governed the melody of the lyrist and tibicen, became subordinate to both, that it obtained its highest perfection. Yet Plato, Aristotle, Aristoxenus, and Plutarch, were always extolling the ancient music, and depreciating that of their own times, when music and poetry were separated. These philosophers may be classed in this respect amongst those with whom every thing that is old is excellent, and who are always talking of the wisdom of antiquity. Plato is said by many writers, both ancient and modern, to have been deeply skilled in music, but it does not appear that his knowledge of it extended farther than to mere theory, or very little more. Plutarch, indeed, in his *Dialogue*, proves his profound musical science, but how? By a long passage from his *Timeus*, in which he applies, like Pythagoras, musical ratios to the soul. Plutarch was a priest of Apollo, and it was natural for him to wish that music should be confined solely to the worship of the gods. All arts and sciences have their commencement, progress, and perfection, and why music should follow a contrary process, be best at first, and then gradually deteriorate, is inexplicable. The golden age never existed but in the imaginations of the poets, and

its name was not bestowed by those who lived in it. Athenæus tells us, in opposition to the complaints of the philosophers above mentioned, that others were of opinion, that music derived its principal improvements in Greece from the theatre. This is a far more probable notion than the other, for if we may judge of former times by the present, the theatre seems the place to develop all the powers of music, and to expand the talents of its professors. For, as Burney well remarks, it is at the musical theatre, the modern temple of Apollo, that perfection of various kinds, elocution, for instance, is more frequently found than any where else.

Our author's account of the opposite systems of Pythagoras and Aristoxenus, is clear and concise, and the remark of Sotericus, quoted by him from Plutarch, on the facts of both systems, is just and rational. The speculations of Pythagoras gave birth to various kinds of music, far more strange and inconceivable than the chromatic and enharmonic. Such as divine music, mundane music, music of the sphere, elementary music, and many other subdivisions, on which Zarlino and the visionary Kircher and others, have enlarged with wonderful complacency. It is to the credit and advantage of both music and philosophy, that they have long descended from these sublime heights, and taken up their proper stations on our own globe: that music is no longer admitted of, that cannot be heard, nor philosophy that cannot be understood. Aristides Quintilianus, a Pythagorean writer on music, assures us, that music comprehends arithmetic, geometry, physics, and metaphysics, and teaches every thing from *solfège* the scale, to the nature and construction of the soul of man, and the soul of the universe. In order to show how the soul is so easily affected by instrumental music, he acquaints us in the Pythagorean way, that the soul, frisking about and playing all kinds of tricks in the purer regions of space, gradually approaches our gross atmosphere, gets a taste for matter and solidity, and at length acquires a warm and comfortable body to cover her nakedness withal. Here she picks up nerves and arteries; there, membranes; here, spirit or breath, and all in a most extraordinary manner, especially the arteries and nerves, for what should these be made of, but the lines and circles of the spheres, in which the soul gets entangled in her passage, like a fly in a spider's web. Thus, continues he, the body becomes similar in its texture to instruments of the wind and stringed kind. The nerves and arteries are strings, and at the same time they are pipes filled with wind. What wonder then, says Aristides Quintilianus, if the soul, being thus intimately connected with a body similar in construction to those instruments, should sympathize with their motions. This is a small sample of the reveries of Pythagorean philosophy respecting music.

To give any thing like an abridgment of the system of Euclid and Ptolemy on music, would be of no use to the generality of readers, and could only be understood by those who are at once classical scholars and well acquainted with the science of music, as it was understood by the ancients, and as it is treated by the moderns. It is quite superfluous here also to speak of Roman music, as it was almost wholly derived from the Greeks. The Romans were never a musical or poetical people like the Greeks, and though in the latter ages of the republic, and under the government of the Cæsars, theatrical

¹ See Burney, vol. I. p. 186, Note.

music was much cultivated at Rome, yet the teachers and practitioners of the art were all Asiatics, or European Greeks. Vitruvius, in his treatise on architecture, has a chapter on music, in which he has given the harmonical system of Aristoxenus; but he introduces it with a complaint of the unavoidable obscurity of musical literature, from the deficiency of terms in the Latin language to explain his ideas. The science of music, in itself obscure, says he, is particularly so, to such as understand not the Greek language.² Vitruvius, therefore, who seems to have been the first that had treated of music in the Roman language, confesses the necessity he was under of using Greek appellatives, not only for the notes, but

for other parts of the art. This clearly shows the low state of music at Rome in the Augustan age, and borrowing implies inferiority. As we can therefore add nothing material to what our author has said on the Roman music, the subject being very barren, we must dismiss it, and close our account of the music of the ancients, with remarking, that notwithstanding all the assistance which the Romans received from the Greeks in the polite arts, and all the encouragement of their institutions, they made no additions to what their Greek instructors had already discovered, nay, were far behind them, and never advanced so far in them as their successors, the modern Italians, have done, who are now, and have been for ages past, as famous as the Greeks themselves in several of the arts, and especially in music, in which every people of Europe have, at different times, consented to become their scholars.

² Lib. v. c. 6.

OF THE ART MILITARY.

HITHERTO we have seen man established by the means of the arts in the enjoyment of all the conveniencies of life. The earth, cultivated by his care and labour, has supplied him, in return, with abundant riches of every kind. Commerce has brought him from the most remote countries, whatever their inhabitants could spare: it has carried him down into the bowels of the earth, and to the bottom of the sea, not only to enrich and adorn him, but to supply himself with an infinity of helps and instruments necessary in his daily occasions. After having built himself houses, sculpture and painting have done their utmost in emulation of each other to adorn his abode; and that nothing might be wanting to his satisfaction and delight, music has come in, to fill up his moments of leisure with grateful concerts, which rest and refresh him after his labours, and make him forget all his pains, and all his afflictions, if he has any. What more can he desire? Happy, if he could not be disturbed in the possession of advantages, that have cost him so much. But the rapacious appetites, the avarice and ambition of mankind, interrupt this general felicity, and render man the enemy of man. Injustice arms herself with force; to enrich herself with the spoils of her brethren. He, who, moderate in his desires, and confining himself within the bounds of what he possesses, should not oppose aggression with force, would soon become the prey of others. He would have cause to fear, that jealous neighbours, and hostile states, would come to disturb his tranquillity, to ravage his lands, burn his houses, carry away his riches, and lead himself into captivity. He has therefore occasion for arms and troops, to defend him against violence, and secure his safety. At first we behold him employed in whatever the sciences have of most exalted and sublime: but, at the first noise of arms, those sciences, born and nurtured in repose, and enemies of tumult, are seized with terror, and reduced to silence, unless the art of war takes them under her protection, and places

safe-guards over them, which can alone

secure the public tranquillity.¹ Thus war becomes necessary to man, as the protectress of peace and repose, and solely employed to repel violence and defend justice;² and it is in this light, I believe it allowable for me to treat of it. I shall run over, as briefly as possible, all the parts of military knowledge, which, properly speaking, is the science of princes and kings, and requires, for succeeding in it, almost innumerable talents, which are very rarely to be found united in the same person.

As I have elsewhere treated what relates to the military affairs of the Egyptians, Carthaginians, Assyrians, and Persians, I shall speak the more sparingly of them in this place. I shall be more extensive upon the Greeks, and principally the Lacedæmonians and Athenians, which, of all the Grecian states, indisputably distinguished themselves most by their valour and military knowledge. I was long in doubt, whether I should speak also of the Romans, who seem foreign to my subject. But upon mature consideration, I thought it necessary to join them with other nations, that the reader at one view, might know, at least in some measure, the manner in which the ancients made war. This is the sole end I propose to myself in this little treatise, without intending any thing further. I have not forgot what happened to a philosopher of Ephesus, who passed for the finest speaker of his times. In a harangue, which he pronounced before Hannibal, he took upon him to treat at large the duties of a good general. The orator was applauded by the whole audience. Hannibal being pressed to give his opinion of him, replied, with the freedom of a soldier, that he had never heard a more contemptible discourse. I should apprehend incurring a like

1 Omnia hæc nostra præclara studia—latent in cunctis ac præsidio bellicæ virtutis. Simul atque increpuit auspicio tumultus, artes illico nostræ conticescunt. *Cic. pro Mur.* n. 22.

2 Suscipienda bella sunt ob eam causam ut sine iniuria in pace vivatur. *Cic. l. 1. de Offic.* n. 35.

censure, if, after having passed my whole life in the study of polite learning, I should pretend to give lessons upon the art military to those who make it their profession.

CHAPTER I.

THIS first chapter contains what relates to the undertaking and declaring of war, the choice of the general and officers, the raising of troops, their provisions, pay, arms, march, encampment, and all that relates to battles.

ARTICLE I.

Undertaking and declaration of War.

SECT. I.

Undertaking of War.

THERE is no principle more generally received, than that which lays down, that war ought never to be undertaken except for just and lawful reasons; nor hardly any one more generally violated. It is agreed, that wars, undertaken solely from views of interest or ambition, are real robberies.³ The pirate's answer to Alexander the Great, so well known in history, was exceedingly just and sensible. And had not the Scythians good reason to ask that ravager of provinces, wherefore he came so far to disturb the tranquillity of nations, who had never done him wrong; and whether it was a crime in them to be ignorant in their woods and deserts, remote from the rest of mankind, who, and of what country Alexander was?⁴ When Philip, chosen arbiter between two kings of Thrace that were brothers, expelled them both from their dominions, did he deserve a better name than that of thief and robber?⁵ His other conquests, though less flagrant crimes, were still but robberies, because founded upon injustice, and no means of conquering seemed infamous to him: *nulla apud eum turpis ratio vincendi*.⁶ The justice and necessity of wars ought therefore to be considered as fundamental principles in point of policy and government.

3 *Inferre bella finitimis*—ac *populos sibi non molestos sola regni cupiditate contere et subdere, quid aliud quam grande latrocinium nominandum est?* *S. Aug. de Civ. D. l. iv. c. 6.*

4 *Quid nobis tecum est? Nunquam terram tuam attigimus. Qui sis, unde venias, licetne ignorare in vastis sylvis viventibus?* *Q. Curt. l. vii. c. 8.*

5 *Philippus, more ingenii sui, ad judicium veluti ad bellum, inopinantibus fratribus, instructo exercitu super- venit; et regno utrumque, non jure sed fraude Latronis ac scelere, spoliavit.* *Justin. l. viii. c. 3.*

6 *Id. Justin.*

In monarchical states, generally, the prince only has power to undertake a war: which is one of the reasons, that renders his office so much to be feared. For, if he has the misfortune to enter into it without a just and necessary cause, he is answerable for all the crimes committed in it, for all the fatal effects attending it, for all the ravages inseparable from it, and all the human blood shed in it. Who can view without trembling such an object and an accountability of so dreadful a nature?

Princes have councils, which may be of great assistance to them, if they take care to fill them up with wise, able, and experienced persons; such as are distinguished by their love and zeal for the good of their country, void of ambition and views of interest, and above all, infinitely remote from all disguise and flattery. When Darius proposed to his council the carrying of the war into Scythia, Artabanus his brother endeavoured at first in vain to dissuade him from so unjust and unreasonable a design: his reasons, solid as they were, were forced to give way to the enormous praises and excessive flattery of the courtiers.⁷ He succeeded no better in the counsel he gave his nephew Xerxes, not to attack the Greeks.⁸ As the latter had strongly expressed his own inclination, an essential fault in such conjunctures, he was far from being opposed, and the deliberation was no more than mere form. On both occasions, the wise prince, who had spoke his sentiments freely, was grieved to see, that neither of the two kings comprehended, "how great a misfortune it is to be accustomed to set no bounds to one's desires, never to be contented with what we possess, and always to be solicitous for enlarging it:"⁹ which is the cause of almost all wars.

In the Grecian republics, the assembly of the people decided finally with regard to war, which method was subject to great inconveniences. At Sparta indeed, the authority of the senate, and especially of the Ephori, as well as at Athens that of the Areopagus and council of four hundred, to whom the preparing of the public affairs belonged, served as a kind of balance to the levity and imprudence of the people: but this remedy had not always its effect. The Athenians are reproached with two very opposite faults, the being either too precipitate or too slow. Against the former a law had been made, by which it was ordained, that war should not be resolved till after a mature deliberation of three days. And in the wars against Philip we have seen, how much Demosthenes complained of the indolence of the Athenians, of

7 *Herod. l. iv. c. 83.*

8 *Ibid. l. vii. c. 18.*

9 *Ὁς κακὸν ἐστὶν διδόναι τὴν ψυχὴν πλείον τι δέξιναι ἢ ἔχειν τοῦ παρόντος.*

which their enemy well knew how to make his advantage. This slowness, in republics, arises from this cause; unless the danger be evident, private persons are too much divided about their different views and interests, to unite speedily in the same resolution. Thus when Philip had taken Elatea, the Athenian orator, terrified with the urgent danger of the republic, caused the law I have mentioned to be repealed, and the war to be resolved on that instant.

The public affairs were examined and determined with much more maturity and wisdom amongst the Romans, though the people with them also had the decision. But the senate's authority was great, and almost always prevailed in important cases. That wise body were very attentive, especially in the earliest times of the republic, to have justice on their side in their wars. This reputation for faith in treaties, equity, justice, moderation, and disinterestedness, was of no less service than the force of arms, in aggrandizing the Roman republic; the power of which was attributed to the protection of the gods, who rewarded justice, and public faith in that manner.¹ It is observed with admiration, that the Romans in all times constantly made religion the basis of their enterprises, and referred the motive and end of them to the gods.² The most powerful reason the generals could use to animate the troops to fight well, was to represent to them, that the war they made was just; and that as only necessity had put their arms into their hands, they might assuredly rely upon the protection of the gods: whereas those gods, the enemies and avengers of injustice, never failed to declare against such as undertook unjust wars, in violation of the faith of treaties.

SECT. II.

Declaration of War.

One effect of the principles of equity and justice, which I have now laid down, was never actually to commence hostilities, before the public heralds had signified to the enemies the grievances they had to allege against them, and they had been exhorted to redress the wrongs declared to have been received. It is agreeable to the law of nature to try methods of amity and accommodation, before proceeding to open rupture. War is the last of remedies, and all others should be endeavoured before that is undertaken. Humanity requires, that room be

given for reflection and repentance; and time left to clear up such doubts, and remove such suspicions, as measures of an ambiguous nature may give birth to, and which are often found to be groundless upon a nearer examination. This custom was generally observed from the earliest ages amongst the Greeks. Polynices, before he besieged Thebes, sent Tydeus to his brother Eteocles to propose an accommodation.³ And it appears from Homer,⁴ that the Greeks deputed Ulysses and Menelaus to the Trojans, to summon them to restore Helen before they had committed any act of hostility; and Herodotus⁵ tells us the same thing. We find a multitude of the like examples throughout the history of the Greeks.

It is true, that an almost certain means of gaining great advantages over enemies is to fall on them at unawares, and to attack them suddenly, without having suffered them to discover our designs, or give them time to put themselves into a state of defence. But these unforeseen incursions, without any previous denunciation, were properly deemed unjust enterprises, and vicious in their principle. It was this, as Polybius remarks,⁶ that had so much discredited the Ætolians, and had rendered them as odious as thieves and robbers; because having no rule but their interest, they knew no laws either of war or peace, and every means of enriching and aggrandizing themselves appeared legitimate to them, without troubling themselves, whether it were contrary to the law of nations to attack neighbours by surprise, who had done them no wrong, and who believed themselves safe in virtue, and under the protection of treaties.

The Romans were not so exact as the Greeks in observing this ceremony of declaring war, which was established by Ancus Martius, the fourth of their kings.⁷ The public officer, (called *Fecialis*,) having his head covered with linen, went to the frontiers of the people against whom preparations of war were making; and as soon as he arrived there, he declared aloud the grievances of the Roman people and the satisfaction he demanded for the wrongs which had been done them; calling Jupiter to witness in these terms, which include an horrible imprecation against himself, and a still greater against the people, of whom he was no more than the voice. "Great God, if I come hither to demand satisfaction in the name of the Roman people, contrary to equity and justice, never suffer me to behold my native country again."

1 Favere pietati fideique deos, per quæ populos Romanus ad tantum fastigii pervenerit. *Liv.* l. xliv. n. 1.

2 Majores vestri omnium magnarum rerum et principia exoriri ab diis sunt, et finem eum statuerunt. *Liv.* l. xiv. n. 39.

3 Potior cunctis sedit sententia, fratris Præterare fidem, tutoque in regna precando Explorare aditus. Audax ea munera Tydeus Sponte subit. *Stat. Theb. lib. xi.*

4 *Iliad.* l. ii. n. 205.

6 Polyb. l. iv. p. 331.

5 *Lib. ii. c. 112, &c.*

7 *Liv.* l. i. n. 32.

He repeated the same thing, changing only some of the terms, to the first person he met; and afterwards at the entrance of the city, and in the public market-place. If at the expiration of thirty days satisfaction were not made, the same officer returning to the same people, pronounced publicly these words:—"Attend, oh Jupiter, Juno, and Quirinus;" and you celestial, terrestrial, and infernal gods, attend. I call you to witness, that such a people, (naming them,) is unjust, and refuses to make us satisfaction. We shall consult at Rome, in the senate, upon the means of obliging them to do us that justice which is our due." Upon the return of the *Fecialis* to Rome, the affair was brought into deliberation, and if the majority of voices were for the war, the same officer went back to the frontier of the same people, and in the presence of at least three persons, pronounced a certain form of declaration of war; after which he threw a spear upon the enemy's lands, which implied that the war was declared. This ceremony was long retained by the Romans. When war was to be declared against Philip and Antiochus, they consulted the *Fecialis*, to know, whether it was to be denounced to themselves in person, or sufficed to declare it in the first place subject to those princes. In the glorious times of the republic, they would have thought it a disgrace to them to have acted by stealth, and to have committed breach of faith, or even used artifice.⁸ They proceeded openly, and left those little frauds and unworthy stratagems to the Carthaginians, and people like them, with whom it was more glorious to deceive, than conquer an enemy with open force.

The heralds at arms, and *Fecialis*, were in great veneration amongst the ancients, and were considered as sacred and inviolable persons. This declaration was a part of the law of nations, and was held necessary and indispensable. It was not preceded by certain public writings, now called *Manifestos*, which contain the pretensions, well or ill founded, of the one or the other party; and the reasons by which they support them. These have been substituted in the room of that august and solemn ceremony, by which the ancients introduced the divine majesty in declarations of war, as witness and avenger of the injustice of those, who undertook wars without reason and necessity. Motives of policy have besides rendered these

manifestos necessary, in the situation of the princes of Europe with regard to each other; united by blood, alliances and leagues offensive or defensive. Prudence requires the prince, who declares war against his enemy, to avoid drawing upon him the arms of all the allies of the power he attacks. It is to prevent this inconvenience manifestos are made in these days, which supply the place of the ancient ceremonies I have mentioned, and which sometimes contain the reasons for beginning the war, without declaring it. I have spoke of pretensions well or ill founded. For states and princes, who war upon each other, do not fail to justify their proceedings with specious prettexts on both sides; and they might express themselves, as a pretor of the Latines did in an assembly, wherein it was deliberated how to answer the Romans, who, upon the suspicion of a revolt, had cited the magistrates of Latium before them. "In my opinion, gentlemen," says he, "in the present conjuncture, we ought to be less concerned about what we have to say, than what we have to do: for when we have acted with vigour, and duly concerted our measures, there will be no difficulty in adapting words to them."¹⁰

ARTICLE II.

Choice of the Generals and Officers. Raising of Troops.

SECT. I.

Choice of the Generals and Officers.

It is a great advantage for kings to be absolute masters in the choice of the generals and officers of their armies; and the highest praise which can be given them, is to say, that known reputation and solid merit are the sole motives that determine them in it. And indeed how can they use too much attention in making a choice, which in some measure raises a private person to equality with his sovereign, by investing him with the whole power, glory, and fortune of his dominions? It is principally by this characteristic princes capable of governing are known; and it is to the same they have been always indebted for the success of their arms. We do not find, that the great Cyrus, Philip, or his son Alexander, ever confided their troops to generals without merit and experience. The case was not the same under the successors of Cyrus and Alexander, with whom intrigue, cabal, and the credit of a favourite usually pre-

⁸ So Romulus was called.

⁹ *Veteres et moris antiqui memores, negabant se in ea legatione Romanas artes agnoscere. Non per insidias et nocturna prælia—nec ut magistratu quam vera virtute gloriarentur, bella majores gessisse. Inducere priusquam gerere solitos bella, denunciare etiam—Hæc Romana esse, non versutiarum Punicarum, neque calliditatis Græcæ: apud quos fallere hostem quam vi superare, gloriosius fuerit.* Liv. l. xlii. n. 47.

¹⁰ Ad summum rerum nostrarum magis pertinere arbitror, quid agendum nobis, quam quid loquendum sit. Facile erit, explicatis consiliis, accommodare rebus verba. Liv. l. viii. n. 4.

sided in this choice, and almost always excluded the best subjects. Hence the success of their wars was answerable to such a manner of commencing them. I have no occasion to cite examples to prove this: history abounds with them.

I proceed to republics. At Sparta the two kings, in virtue of their rank only, had the right and possession of the command, and in the earlier times marched together at the head of the army:¹ but a division, that happened between Cleomenes and Demaratus, occasioned the making of a law, which ordained that only one of the kings should command the troops; and this was afterwards observed, except in extraordinary cases. The Lacedæmonians were not ignorant that authority is weak when divided; that two generals seldom agree long; that great enterprises can hardly succeed, unless under the conduct of a single man; and that nothing is more fatal to an army than a divided command. This inconvenience must have been much greater at Athens, where by the constitution of the state itself, ten persons were always to command; because Athens being composed of ten tribes, each furnished their own chief, who commanded their day successively. Besides which, they were chosen by the people, and that every year. This occasioned a smart saying of Philip's; that he admired the good fortune of the Athenians, who could find in a set time, every year, ten captains; whereas, during his whole reign, it had scarce been in his power to find one.²

The Athenians, however, especially at critical conjunctures, must have been attentive in appointing citizens of real merit for their generals. From Miltiades to Demetrius Phalæreus, that is to say, during almost two hundred years, a considerable number of great men were placed by Athens at the head of her armies, who raised their country's glory to the most exalted height. In those times all jealousy was banished, and the public good was the sole motive of power. There is a fine example of this in the war of Darius against the Greeks.³ The danger was exceeding great. The Athenians were alone against an innumerable army. Of the ten generals, five were for fighting, and five for retreating. Miltiades, who was at the head of the former, having gained the Polemarch on his side, (which officer had a decisive voice in the council of war in case of division,) it was resolved to fight. All the generals acknowledging the superiority of Miltiades to themselves, when the day came, resigned the command to him. It was at this time the celebrated battle of Marathon was fought. It sometimes happened

that the people, suffering themselves to be swayed by their orators, and following their caprice in every thing, conferred the command upon persons unworthy of it. We may remember the absolute credit of the famous Cleon with the multitude, who was appointed to command in the first years of the Peloponnesian war, though a turbulent, hotheaded, violent man, without ability or merit. But these examples are rare, and were not frequently repeated at Athens till the later times, when they proved one of the principal causes of its ruin.

The philosopher Antisthenes made the Athenians sensible one day, in a pleasant and facetious manner,⁴ of the abuses committed amongst them in the promotions to the public offices. He proposed to them, with a serious air, in a full assembly, that it should be ordained by a decree, that for the future the asses should be employed in tillage as well as the horses and oxen. When he was answered, that the asses were not intended by nature for that labour: "You are deceived," said he, "that signifies nothing: don't you see that our citizens, though ever so much asses and sots before, become immediately able generals, solely from your election of them."

At Rome, the people also elected the generals, that is to say, the consuls. They held their office only one year. They were sometimes continued in the command under the names of proconsuls or proprætors. This annual change of the generals was a great obstacle to the advancement of affairs, the success of which required an uninterrupted continuation.⁵ And this is the advantage of monarchical states, in which the princes are absolutely free, and dispose all things at discretion, without being subject to any necessity. Whereas amongst the Romans a consul sometimes arrived too late, or was recalled before the time for holding the assemblies. Whatever diligence he might use to arrive early, before his predecessor had transferred to him the command, and he was sufficiently informed in the condition of the army, a knowledge indispensable previous to all undertakings, a considerable space of time must have elapsed, which made him lose the occasion of

4 Diog. Laert. in Antisth. p. 360.

5 Interrumpi tenorem rerum, in quibus peragendis continuatio ipsa efficacissima esset, minime convenire. Inter traditionem imperii, novitatemque successoris, quæ noscendis prius quam agendis rebus imbuenda sit, sæpe bene gerendæ rei occasiones interdicere. Liv. l. xli. n. 15.

Post tempus (consules) ad bella lerunt: ante tempus comitiorum causa revocati sunt: in ipso conatu rerum circum egit se annus. Male gestis rebus alterius successum est: tironem, aut mala disciplina institutum exercitum acceperunt. At herculè Reges, non liberi solum impedimentis omnibus, sed domini rerum temporumque, trahunt consilii cuncta, non sequuntur. Liv. l. ix. n. 18.

1 Her. l. v. c. 75.

2 This was Parmenio.

3 Herod. l. vi. c. 109, 110.

acting, and of attacking the enemy to advantage. Besides which, he often found affairs upon his arrival in a bad condition through his predecessor's ill conduct, and an army, either composed in part of new raised and unexperienced troops, or corrupted by license and want of discipline. Fabius intimated part of these reflections to the Roman people, when he exhorted them to choose a consul capable of opposing Hannibal.⁶ The short term of one year, and the uncertainty of the commands being further prolonged, did indeed induce the generals to make the best use of their time: but it was often a reason for their putting a speedier end to their enterprises, than they would otherwise have done, and upon less advantageous conditions, from the apprehension that a successor might reap the fruit of their labours, and deprive them of the honour of having terminated the war gloriously. A true zeal for the public good, and a perfectly disinterested greatness of soul, would have disdained such considerations. I am afraid, there are very few examples of this kind. The great Scipio himself;⁷ I mean the first, is reproached with this weakness, and with not having been insensible to this fear. A virtue of so pure and exalted a nature as to neglect so sensible and so affecting an interest, seems above humanity, at least it is very uncommon.

The authority of the consuls confined, in point of time, within such narrow bounds, was, it must be confessed, a great inconvenience. But the danger of infringing the public liberty, by continuing the same man longer in the command of all the forces of the state, obliged them to overlook this inconvenience, from the apprehension of incurring a much greater. The necessity of affairs, the distance of places, and other reasons, at length obliged the Romans to continue their generals in the command of their armies for many years. But the inconvenience really ensued from it, which they had apprehended; for the generals, by that duration of their power, became their country's tyrants. Amongst other examples I might cite Sylla, Marius, Pompey, and Cæsar.

The choice of the generals usually turned upon their personal merit; and the citizens of Rome had at the same time a great advantage,

and a powerful motive for acting in that manner. What facilitated this choice, was the perfect knowledge they had of those who aspired at command, with whom they had served many campaigns, whom they had seen in action, and whose genius, talents, successes, and capacity for the highest employments, they had time to examine and compare by themselves and with their comrades. This knowledge, which the Roman citizens had of those who demanded the consulship, generally determined their suffrages in favour of the officers, whose ability, valour, generosity, and humanity, they had experienced in former campaigns.⁸ "He took care of me," said they, "when I was wounded; he gave me part of the spoils; under his conduct we made ourselves masters of the enemy's camp, and gained such a victory; he always shared in the pains and fatigue with the soldier; it is hard to say whether he is most fortunate or most valiant." Of what weight was such discourse! The motive, which induced the Roman citizens to weigh and examine carefully the merit of the competitors, was the personal interest of the electors, the major part of whom, being to serve under them, were very attentive not to confide their lives, honour, and the safety of their country, to generals they did not esteem, and from whom they did not expect good success. It was the soldiers themselves, who in the *comitia* made choice of these generals. We see they knew them well; and find by experience, that they were seldom mistaken. We observe even in our times, that when they go upon parties to plunder, (*marauding*) they always choose, without partiality or favour, those amongst them, that are most capable of commanding them. It was in this spirit, Marius was chosen against the will of his general Metellus; and Scipio Æmilianus preferred, through a like prejudice of the soldiers in his favour.

It must be owned, however, that the nomination of commanders was not always directed by public and superior views; and that cabal, and address in gaining the affections of the people by flattering and soothing their passions, had sometimes a great share in it. This was seen at Rome in regard to Terentius Varro, and at Athens in the instance of Cleon. The

6 Cum, qui est summus in civitate dux, cum legerimus, tamen repente lectus, in annum creatus adversus veterem ac perpetuum imperatorem comparabitur, nullis neque temporis neque juris inclusum angustiis, quo minus ita omnia gerat administretque ut tempora postulabunt belli: nobis autem in apparatu ipso, ac tantum inchoantibus res, annus circumagitur. *Liv.* l. xxiv. n. 8.

7 Ipsam Scipionem expectatio successoris, venturi ad paratam alterius labore ac periculo finiti belli famam, sollicitabat. *Liv.* l. xxx. n. 36.

8 Num tibi hæc parva adjumenta et subsidia consulatus, voluntas militum? que cum per se valet multitudine, tum apud suos gratia: tum verò in consule declarando multum etiam apud populum Romanum auctoritatis habet suffragatio militaris.—Gravis est illa oratio: Me faucium recreavit; me præda donavit; hoc duce castra cepimus, signa contulimus; nunquam iste plus militi laboris, imposuit, quam sibi sumisit; ipse cum fortis, tum etiam felix. Hoc quanti putas esse ad famam hominum ac voluntatem? *Cic. pro Muræna.* v. 38.

multitude is always the multitude, that is to say, fickle, inconstant, capricious, and violent: but the people of Rome were less so than any. They gave upon many occasions examples of a moderation and wisdom not to be sufficiently admired;¹ submitting themselves in the most laudable manner to the opinion of the senate; forgetting nobly their prejudices, and even resentments, in favour of the public good, and voluntarily renouncing the choice they had made of persons incapable of sustaining the weight of affairs, as it happened, when the consulship was continued to Fabius, after the remonstrance himself had made upon the incapacity of those who had been elected: an odious proceeding in every other conjuncture, but which at that time did Fabius great honour, because the effect of his zeal for the republic, to the safety of which he was not afraid, in some measure, to sacrifice his own reputation.²

The armies of the Roman people consisted generally of four legions, of which each consul commanded two. They were called the first, second, third, and so on, according to the order in which they had been raised. Besides the two legions, commanded by each consul, there was the same number of infantry, supplied by the allies. After all the people of Italy were associated into the freedom of the city, that disposition underwent many alterations. The four legions under the consuls, were not the whole force of Rome. There were other bodies of troops commanded by prætors, proconsuls, &c. When the consuls were in the field together, their authority being equal, they commanded alternately, and had each their day, as it happened at the battle of Cannæ. One of them often, knowing his colleague's superior ability voluntarily resigned his rights to him. Agrippa Furius acted in this manner,³ in regard to the famous T. Quintius Capitolinus, who, in gratitude to his colleague's generosity and noble behaviour, communicated all his designs to him, shared with him the honour of all the successes, and made him his equal in every thing. On another occasion, the military tribunes, who had been substituted to the consuls, and were at

that time six in number, declared, that in the present critical conjuncture, only one of them was worthy of the command, this was the great Camillus, and that they were resolved to repose their whole authority in his hands; convinced, that the justice they rendered his merit, could not but reflect the greatest glory upon themselves.⁴ So generous a conduct was attended with universal applause. Every body cried out, that they should never have occasion to have recourse to the unlimited power of dictators, if the republic always had such magistrates, so perfectly united amongst themselves, so equally ready either to obey or command, and who, so far from desiring to engross all glory to themselves, were contented to share it in common with each other.

It was a great advantage to an army to have such a general, as Livy describes in the person of Cato, who was capable of descending to the least particular, who was alike attentive to little and great things; who foresaw at distance, and prepared every thing necessary to an army; who did not content himself with giving orders, but took care to see them executed in person; who was the first in setting the whole army the example of an exact and severe discipline; who disputed sobriety, watching, and fatigue, with the meanest soldier; and in a word, who was distinguished by nothing in the army, but the command, and the honours annexed to it.⁵

After the nomination of consuls and prætors, the tribunes were elected to the number of twenty-four, six to each legion. Their duty was to see, that the army observed discipline, obeyed orders, and did their duty.⁶ During the campaign, which was six months, they commanded successively, two and two together, in the legion for two months: they drew lots for the order in which they were to command.⁷

4 Collegæ fateri regimen omnium rerum, ubi quid bellici terroris ingruat, in viro uno esse: sibi quæ destinatum in animo esse Camillo summittente imperium; nec quicquam de majestate sua detractum credere, quod majestati ejus viri concessissent.—Erecti gaudio fremunt, nec dictator unquam opus fore reip. si tales viros in magistratu habeant, tam concordibus junctos animos, parere atque imperare juxta paratos, laudemque conferentes potius in medium, quam ex communi ad se trahentes. *Liv.* l. vi. n. 6.

5 In consule ea vis animi atque ingenii fuit, ut omnia maxima minimaque per se adiret; atque ageret; nec cogitaret modò imperaretque quæ in rem essent, sed pleraque per se ipse transigeret; nec in quemquam omnium gravidiū severiūque, quam in semetipsum imperium exercebat; parsimonia, et vigiliis, et labore cum ultimis militum certaret; nec quicquam in exercitu suo præcipui præter honorem atque imperium haberet. *Liv.* l. xxxiv. n. 18.

6 Polyb. l. vi. p. 406.

7 Secundæ Legionis Fulvius Tribunus militum erat. *Is mensibus suis dimisit legionem.* *Liv.* l. xl. n. 41.

1 *Liv.* l. x. n. 22, and 34. *Id.* l. xxvi. n. 22.

2 Tempus ac necessitas belli, ac discrimen summæ rerum faciebant ne quis aut in exemplum exquireret, aut suspectum cupiditatis imperii consulem haberet. Quin laudabant potius magnitudinem animi, quod, cum summo imperatore esse opus reip. sciret, sequæ eum haud dubiè esse; minoris invidiam, si qua ex re oriretur, quam utilitatem reip. fecisset. *Liv.* l. xxiv. n. 9.

3 In exercitu Romano cum duo consules essent potestate pari; quod saluberrimum in administratione magnarum rerum est, summa imperii, concedente Agrippa, penes collegam erit: et prælatus ille facilitati summittentis se comiter respondebat, communicando consilia laudesque, et æquando imparcem sibi. *Liv.* l. lii. n. 70.

At first the consuls nominated these tribunes; and it was of great advantage to the service, that the generals themselves had the choice of their officers. In process of time, of the four and twenty tribunes the people elected six;⁸ about the 393d year of Rome, and fifty years after, that is to say, in the 444th year of Rome, they chose to the number of sixteen.⁹ But, in important wars, they had sometimes the moderation and wisdom to renounce that right, and to abandon the choice entirely to the prudence of the consuls and prætors, as happened in the war against Perseus king of Macedonia;¹⁰ of the effects of which Rome was in very great apprehension. Of these twenty-four tribunes, fourteen must have served at least five years, and the rest ten: a very wise regulation, and well calculated to inspire the troops with valour, from the esteem and confidence it gave them for their officers. Care was also taken to distribute these tribunes in such a manner, that in each legion the most experienced were united with those who were younger, in order to instruct and form them for commanding.

The Præfects of the allies, *præfecti socium*, were in the allied troops what the tribunes were in the legions. They were chosen out of the Romans, as we may infer from these words of Livy, *Præfectus socium, civesque Romanos alios*.¹¹ Which is confirmed by the names of those we find appointed in the same author.¹² This practice, which left the Romans the honour of commanding in chief amongst the allies, and gave the latter only the quality of chief subaltern officers, was the effect of a wise policy, to hold the allies in dependance, and might contribute very much to the success of enterprises, in making the same spirit and conduct actuate the whole army.

I have not spoken of the officers called *Legati*, lieutenants. They commanded in chief under the consul, and received his orders, as the lieutenant generals serve under a marshal of France, or under the eldest lieutenant general, who commands the army in chief. It appears that the consuls chose these lieutenants. Mention is made of this in the earliest times of the republic. In

the battle of the Lake of Regillus, that is to say, in the 255th year of Rome, T. Herminius the lieutenant distinguished himself in a particular manner.¹³ Fabius Maximus, so well known from his wise conduct against Hannibal, did not disdain to be his son's lieutenant, who had been elected consul.¹⁴ The latter in that quality, was preceded by twelve lictors, who walked one after the other; part of their function was to cause due honour to be paid the consul. Fabius the father, upon his son's going to meet him, having passed the first eleven lictors, continuing on horseback, the consul ordered the twelfth to do his duty. That lictor immediately called out to Fabius with a loud voice to dismount. The venerable old man obeyed directly, and addressing himself to his son, told him: "I had a mind to see, whether you knew that you were consul."¹⁵ It is well known that Scipio Africanus offered to serve as lieutenant under the consul his brother, and thereby determined the senate to give the latter Greece for his province. The reader has no doubt observed, in all that I have hitherto related concerning the Romans, a spirit of understanding and conduct which evidently shows, that the great success of their arms was not the effect of chance, but of the wisdom and ability, which presided over every part of their government.

SECT. II.

Raising of troops.

The Lacedæmonians properly speaking, were a people of soldiers. They cultivated neither arts, nor sciences. They applied themselves to neither commerce, nor agriculture; leaving the care of their lands entirely to slaves, who were called *Helots*. All their laws, institutions, education, in a word, the whole scheme of their government, tended to making them warriors. This had been the sole view of their legislator, and it may be said, that he succeeded perfectly well in it. Never were there better soldiers, more formed for the fatigues of war, more inured to military exercises, more accustomed to obedience and discipline, more full of courage and intrepidity, more sensible to honour, nor more devoted to glory and the good of their country. They were distinguished into two sorts: the one, who were properly called *Spartans*, inhabited the city of Sparta; the others, who were named only *Lacedæmonians*, resided in the country. The former were the flower of the state, and filled all offices. They were almost all of them capable of commanding in

8 Cum placuisset eo anno tribunos militum ad legiones suffragio fieri (nam et antea, sicut nunc quos Rufulos vocant, imperatores ipsi faciebant) secundum in sex locis Manlius tenuit. Liv. l. vii.

9 Duo imperia eo anno dari cepta per populum, utraque ad rem militarem pertinentia. Unum, ut tribuni sendenti in quatuor legiones a populo crearentur, quæ antea perquam paucis suffragio populi relictis locis, dictatorem et consulum fuerant beneficia. Liv. l. ix. n. 30.

10 Decretum ne tribuni militum eo anno suffragiis crearentur, sed consulum prætorumque in iis faciendis iudicium arbitriumque esset. Liv. l. xlii. n. 31.

11 Lib. xxiii. n. 7.

12 Lib. xxviii. n. 26, and 41. Lib. xxxiii. n. 36, &c.

13 Liv. l. xxi. n. 20.

14 Id. l. xxiv. n. 44.

15 Id. l. xxxvii. n. 1.

chief. The wonderful change, occasioned only by one of them (Xanthippus) in the army of the Carthaginians, to whose aid he was sent, has been related; and also in what manner Gylippus, another Spartan, saved Syracuse. Such were the *three hundred*, who, with Leonidas at their head, arrested for a great while the innumerable army of the Persians, at the straits of Thermopylæ. The number of the Spartans at that time amounted to eight thousand men, or something more.¹ The age (with them) for carrying arms was from thirty to sixty. The elder and younger were left at home to guard the city. They never armed their slaves but upon extreme necessity. At the battle of Platæa, the troops furnished by Sparta, amounted to ten thousand men, that is to say, five thousand Lacedæmonians, and as many Spartans. Each of the latter had seven Helots to attend him, the number of which in consequence amounted to thirty-five thousand. These were equipped as light armed troops. The Lacedæmonians had very little cavalry, and naval affairs were then entirely unknown to them. It was not till very late, and contrary to the plan of Lycurgus, that they commenced a maritime power, nor were their fleets at any time very numerous.

Athens was much larger and better peopled than Sparta. In the time of Demetrius Phalærus it was computed to have twenty thousand citizens, ten thousand strangers settled in the city, and forty thousand slaves. All the young Athenians were enrolled in a public register at the age of eighteen, and at the same time took a solemn oath, by which they engaged to serve the republic, and to defend it to the utmost of their power upon all occasions. They were bound by this oath to the age of sixty. Each of the ten tribes, that formed the body of the state, furnished a certain number of troops, according to the occasion, either for the sea or land service: for the naval power of Athens became very considerable in process of time. In Thucydides² we see that the troops of the Athenians, in the beginning of the Peloponnesian war, were thirteen thousand heavy armed foot, sixteen hundred archers, and very near as many horse, which in all might amount to sixteen thousand men; without including sixteen thousand more, who remained to guard the city, citadel, and ports, either citizens under or over the military age, or strangers settled amongst them. The fleet at that time consisted of three hundred galleys. I shall relate in the following article the order observed in them.

The troops both of Sparta and Athens, were not numerous, but full of valour, well disci-

plined, intrepid, and one might also say, invincible. They were not soldiers raised by chance, often without spirit or home, insensible to glory, indifferent to a success little affecting them; who had nothing to lose, who made war a mercenary traffic, and sold their lives for a scanty means of subsistence, their pay. They were the chosen troops of the two most warlike states in the world; soldiers determined to conquer or die; who breathed nothing but war and battle; who had nothing in view but glory and the liberty of their country; who in action believed they saw their wives and children, whose safety depended on their arms and valour. Such were the troops raised in Greece, amongst whom desertion, and the punishment of deserters, was never so much as mentioned; for could a soldier be tempted to renounce his family and country for ever.

As much may be said of the Romans, of whom it remains for us to speak. Amongst them, the consuls generally levied the troops: and as new ones were nominated every year, so new levies were also made annually. The age for entering into the army was seventeen years. Only citizens were admitted to serve in it; and none were received under that age, but in extraordinary cases and on pressing occasions.³ Once they were obliged to arm slaves: but first, which is very remarkable, they were severally asked, whether they entered themselves freely and of their own accord; because they did not think it proper to place any confidence in soldiers listed by fraud or force. Sometimes they went so far as to arm those, who were confined in the prisons either for debt, or crimes: but this was very seldom practised. The Roman troops therefore were composed only of citizens. Those amongst them who were poor (*proletarii, capite censi*) were not listed. They wanted soldiers, whose fortunes might be answerable to the republic for their zeal in its defence. Most of these soldiers lived in the country, to take care of their estates themselves, and to improve them with their own hands. Those who dwelt at Rome, had each of them their portion of land, which they cultivated in the same manner. So that the whole youth of Rome were accustomed to support the rudest fatigues;⁴ to endure sun,

3 Dilectu edicto, juniores annis septemdecim, et quosdam prætextatos scribunt—Aliam formam novi deductus inopia liberorum capitum ac necessitas dedit. Octo millia juvenum validorum ex servitiis prius sciscitantes singulos velient ne militare, empti publicè armaverunt. *Liv. l. xxxii. n. 57.*

4 Sed rusticorum mascula militum Proles, Sabellis docta ligonibus Versare glebas, et severæ Matris ad arbitrium recisos Portare fustes. *Horat. Od. 6. lib. iii.*

1 Herod. l. vii. c. 34.

2 Thucyd. l. ii. p. 110.

rain, and hail; to lie hard and often in the midst of the fields, and in the open air; to live soberly and wisely, and to be contented with a little. They never knew pleasures or luxury, had their members inured to all sorts of labour, and by their residence in the country, had contracted the habit of handling heavy instruments, digging of trenches, and carrying heavy burdens. Equally soldiers, and labourers, these Romans in entering the service only changed their arms and tools. The young people, who lived in the city, were not much more tenderly bred than the others. Their continual exercises in the field of Mars, their races on horseback and on foot, always followed by the custom of swimming the Tiber to wash off their sweat, was an excellent apprenticeship for the trade of war. Such soldiers must have been very intrepid. For the less men are acquainted with pleasures, the less they fear death.

Before they proceeded to levy troops, the consuls gave the people notice of the day, upon which all the Romans, capable of bearing arms, were to assemble. The day being come, and the people assembled in the capitol, or the field of Mars, the military tribunes drew the tribes by lot, and called them out as they came up. They afterwards made their choice of these citizens, taking them each in his rank, four by four, as near as possible, of equal stature, age and strength; and continued to do the same, till the four legions were complete. After the troops were levied, every soldier took an oath to the consul or tribunes. By this oath they engaged to assemble at the consul's order, and not to quit the service without his permission; to obey the orders of the officers, and to do their utmost to execute them; not to retire either through fear, or to fly from the enemy; and not to quit their rank. This was not a mere formality, nor a ceremony purely external, of no effect with regard to the conduct. It was a very serious act of religion, sometimes attended with terrible imprecations, which made a strong impression upon the mind, was judged abso-

lutely and indispensably necessary, and without which the soldiers could not fight against the enemy. The Greeks as well as Romans made their troops take this oath, or one to the same effect; and they founded their reason for it upon a great principle. They knew, that a private person of himself has no right over the lives of other men: that the prince or state, who have received that power from God, put arms into his hands: that it is only in virtue of this power, with which he is invested by his oath, that he can draw his sword against the enemy: and that, without this power, he makes himself guilty of all the blood he sheds, and commits homicide as often as he kills an enemy. 'The consul,' who commanded in Macedonia against Perseus, having dismissed a legion, in which the son of Cato the censor served, that young officer, who had nothing in view but to distinguish himself by some action, did not withdraw with the legion, but remained in the camp. His father thereupon wrote immediately to the consul, to desire, if he thought fit to suffer his son to continue in the army, that he would make him take a new oath, because being discharged from the former, he had no longer any right to join in battle against the enemy.⁵ And he wrote to his son to the same effect, advising him not to fight till he had sworn again. It was in consequence of the same maxim, that Cyrus the Great exceedingly applauded the action of an officer, who, having raised his arm to strike an enemy, upon hearing the retreat sounded, stooped short, regarding that signal as an order to proceed no farther.⁷ What might not be expected from officers and soldiers so accustomed to obedience, and so full of respect for their general's orders, and the rules of discipline?

The tribunes of the soldiers at Rome, after the oath, told the legions the day and place for the general rendezvous. When they were assembled at the time fixed, the youngest and poorest were made light armed troops; the next in age *Hastati*; the strongest and most vigorous *Principes*; and the oldest soldiers, *Triarii*. Two legions were usually given to each consul. The number of soldiers to a legion were not always the same. At first they were not above three thousand, but were afterwards augmented to four, five, six thousand, and something more. The most usual number was four thousand two hundred foot, and three hundred horse. Such it was in the time of Polybius, where I shall fix it.

The Legion was divided into three bodies, the *Hastati*, the *Principes*, and the *Triarii*.

But soldiers of a rustic mould;
Rough, hardy, season'd, manly, bold;
Either they dug the stubborn ground,
Or thro' hewn woods their weighty strokes did sound.

Roscommon.

Nunquam puto potuisse dubitari aptiorem armis rusticam plebem, quæ subdivo et in labore nutritur; solis patiens; umbræ negligens; balnearum nescia; deliciarum ignara; simplicis animi; parvo contenta; duratis ad omnem laborum tolerantiam membris; cui gestare ferrum, fossam ducere, onus ferre, consuetudo de rure est — Idem bellator, idem agricola genera tantum mutabat armorum — Sudorem cusu et campestri exercitio collectum nando juvenus ablucbat in Tyberi. Nescio enim quomodo minus mortem timet, qui minus deliciarum novit in vita. *Veget. de re mil. l. i. c. 3.*

⁵ Manucius believes this to have been Paulus Æmilius.

⁶ Quia priore amisso jure, cum hostibus pugnare non poterat. *Cic. de Offic. l. i. n. 36, 37.*

⁷ Xenoph. in Cyrop.

The reader will be so good as to excuse me the use of these three words, having no others to express their meaning. The two first bodies consisted each of twelve hundred men, and the third of six hundred only. The Hastati formed the first line, the Principes the second; and the Triarii the third. This last body was composed of the oldest and most experienced soldiers, and at the same time the bravest in the army. The danger must have been very great and urgent before it reached this third line. From whence came the proverbial expression, *Res ad Triarios rediit*. Each of these three bodies were divided into ten parts or *Maniples*, consisting of sixscore in the Hastati and Principes, and only of sixty in the Triarii. Each Maniples had two centuries or companies. Anciently, and at its first institution by Romulus, the century had an hundred men from which it took its name. But afterwards it consisted only of sixty in the Hastati and Principes, and thirty in the Triarii. The commanders of these centuries or companies were called *Centurions*. I shall soon explain the distinction of their ranks. Besides these three bodies, there were in each legion light armed troops of different denominations, *Rorarii*, *Accensi*; and in later times the *Velites*. They were also twelve hundred in number. They were not properly a distinct body, but disposed into the three others, according to occasion. Their arms were a sword, a javelin, (*hasta*) a *parma*, that is a light shield. The youngest and most active soldiers were chosen for this body.

From the time of Julius Cæsar no mention is made of the distinct ranks of the Hastati, Principes, and Triarii, though the army was almost always drawn up in three lines. The legion at that time was divided into ten parts, which were called *Cohortes*. Each cohort was a kind of legion abridged. It had sixscore Hastati, sixscore Principes, sixty Triarii, and sixscore light armed men, which made in all four hundred and twenty. That is precisely the tenth part of a legion, consisting of four thousand two hundred foot.

The Roman cavalry was not very numerous: three hundred horse to above four thousand foot. It was divided also into ten companies, (*Alas*) each consisting of thirty men. The horsemen were chosen out of the richest of the citizens;¹ and in the distribution of the Roman people by centuries, of which Servius Tullius was the author, they composed the eighteen first centuries. They are the same who are afterwards mentioned in history under the name of Roman knights, and formed a third and middle order between the senate and people. The republic supplied them with horses and subsistence. Till

the siege of Veii, there were no other cavalry in the Roman armies.² At that time those who were qualified by their estates to be admitted into the cavalry, but had not a horse allowed them at the public expense, nor in consequence the rank of knights, offered to serve in the cavalry, supplying themselves with horses. Their offer was accepted. From thenceforth there were two sorts of cavalry in the Roman armies:³ the one whom the public supplied with horses, *equum publicum*, and these were the true Roman knights; the others who furnished themselves, and served *equo suo*, had not the title or prerogatives of the knights. But the horse kept at the public expense was always the constitutive title of the Roman knight; and when the censors degraded a Roman knight, it was by taking his horse from him.

Besides the citizens who formed the legions, there were troops of the allies in the Roman army: these were states of Italy, which the Romans had subjected, and had allowed the use of their laws and government, upon condition of supplying them a certain number of troops. They furnished an equal number of infantry with the Romans, and generally twice as many horse. Amongst the allies, the best made and bravest both of the horse and foot were chosen to be posted about the consul's person: these were called *Extraordinarii*. The third part of the horse, and the fifth of the foot, were disposed of in this manner; the rest were placed half on the right, and half on the left wings, the Romans generally reserving the centre to themselves.

The Roman army, as we see from what has hitherto been said, consisted solely of citizens and allies. It was not till the sixth year of the second Punic war, that the Romans admitted mercenaries into their troops, which was seldom or ever done in the times of the republic.⁴ These were Celtiberians, who, as we find, composed the greatest part of Cn. Scipio's army in Spain: an essential fault, which cost him his life, and Rome almost the loss of Spain, and perhaps the ruin of her empire. That example, as Livy wisely observes,⁵ ought to have taught

2 Liv. l. v. n. 7.

3 This distinction is strongly enough marked in Mago's discourse to the senate of Carthage upon the gold rings. *Neminem nisi equitem, et eorum ipsorum primores, id insigne genere.* Liv. l. xxiii. n. 12. These primores equitum are the true Roman knights, qui merebant equo publico.

4 Id ad memoriam insigne est, quod mercenarium militum in castris neminem ante, quam tum Celtiberos, id Romani habuerunt. Liv. l. xxiv. n. 49.

5 Id quidem cavendum semper Romanis ducibus erit, exemplum hæc vere pro documentis habenda, ne ita externis credant auxiliis, ut non plus sui roboris suarumque propriè virium in castris habeant. Liv. l. xxv. n. 33.

Roman generals never to suffer a greater number of strangers than of their own troops in their armies. It is well known, that the revolt of foreign troops more than once brought Carthage to the very brink of ruin. That republic had almost no other soldiers; which was the great defect of its military economy. Such a mixture of foreign and barbarous troops, and their superiority in number, in the Roman armies, were one of the principal causes of the entire ruin of the Roman empire in the West.

I return to the centurions, whose different ranks I am to explain. I have said that in each Maniple there were two centuries, and in consequence two centurions. He who commanded the first century of the first Maniple of the Triarii, called also *Pilani*, was the most considerable of all the centurions, and had a place in the council of war with the consul and principal officers: *Primpilus*, or *Primpili Centurio*. He was called *Primpilus prior*, to distinguish him from the centurion who commanded the second century of the same Maniple, who was called *Primpilus posterior*. And the same was done in the other centuries. The centurion who commanded the second century of the same Maniple of the Triarii, was called *secundi pili Centurio*; and so on to the tenth, who was called *decimi pili Centurio*. The same order was observed amongst the Hastati and Principes. The first centurion of the Principes was called *primus Princeps*, or *primi principis Centurio*; the second, *secundus Princeps*, and so on to the tenth. In this manner the Hastati were called, *primus Hastatus*, *secundus Hastatus*, &c. The centurions were raised from an inferior to a superior degree, not only by seniority, but merit. This distinction of degrees and posts of honour, which were only granted to bravery and real service, excited an incredible emulation amongst the troops, that kept them always in spirit and order. A private soldier became a centurion, and afterwards rising through all the different degrees, might at length arrive at the principal posts. This view, this hope supported them in the midst of the most severe fatigues, animated them, prevented them from committing faults, or taking distaste to the service, and prompted them on to the most arduous and valiant actions. It is in this manner an invincible army is formed.

The officers were very warm in preserving these distinctions and pre-eminences. I shall relate an instance of this very proper to the present subject, that is, the raising of troops, which does great honour to the Roman soldiery, and shews with what moderation and wisdom their sensibility for glory was attended. When the Roman people had resolved upon the war against Perseus, the last king of Macedonia, amongst the other measures taken for the success

of it, the senate decreed, that the consul, charged with that expedition, should raise as many centurions and veteran soldiers, as he pleased, out of those who did not exceed fifty years of age. Twenty-three centurions, who had been *Primpili*,⁶ refused to take arms, unless the same rank were granted them, which they had in the preceding campaigns. The affair was brought before the people. After Popilius, who had been consul two years before, had pleaded the cause of the centurions, and the consul his own, one of the centurions, who had appealed to the people, having obtained permission to speak, expressed himself to this effect.—“I am called Sp. Ligustinus, of the Crustumine tribe, descended from the Sabines. My father left me a small field and a cottage, where I was born, brought up, and now live. As soon as I was at age to marry, he gave me his brother's daughter for my wife: she brought me no portion but liberty, chastity, and a fruitfulness sufficient for the richest houses. We have six sons and two daughters both married. Of my sons, four have taken the robe of manhood, (*toga virilis*,) the other two are still infants. I began to bear arms in the consulship of P. Sulpicius and C. Aurelius. I served two years as a private soldier in the army, in Macedonia, against king Philip. The third year T. Quintius Flamininus, to reward me for my services, made me captain of a century in the first Maniple of the Hastati.⁷ I served afterwards as a volunteer in Spain, under Cato; and that general, who is so excellent a judge of merit, made me first Maniple of the Hastati.⁸ In the war against the Ætolians and king Antiochus, I rose to the same rank amongst the Principes.⁹ I afterwards made several campaigns, and in a very few years have been four times *Primpilus*;¹⁰ I have been four and thirty times rewarded by the generals, have received six civic crowns,¹¹ have served two and twenty campaigns, and am above fifty years old. Though I had not completed the number of years required by the law, and my age did not discharge me, substituting four of my children in my place, I should deserve to be exempt from the necessity of serving. But by all I have said, I only intend to shew the justice of my cause. For the rest, as long as those who levy the troops shall judge me capable of

6 Qui primos pilos duxerant.

7 Pater mihi uxorem fratris sui filiam dedit, quæ secum nihil attulit præter libertatem, pudicitiam, et cum his fecunditatem, quanta vel in diti domo satis esset.

8 Decimum ordinem Hastatum assignavi.

9 Dignum iudicavit, cui primum Hastatum prioris centuriæ assignaret.

10 Mihi primus Princeps prioris centuriæ est assignatus.

11 Quater primum pilum duxi.

12 The crowns given for having saved the life of a citizen were called so.

bearing arms, I shall not refuse the service. The tribunes shall rank me as they please, that is their business: mine is so to act, that none be ranked above me for valour; as all the generals, under whom I have had the honour to serve, and all my comrades can witness for me, I have hitherto never failed to do. For you, centurions, notwithstanding your appeal, as even during your youth, you have never done any thing contrary to the authority of the magistrates and senate, in my opinion, it would become your age to shew yourselves submissive to the senate and consuls, and to think every station honourable, that gives you opportunity to serve the republic."¹ When he had done speaking, the consul, after having given him the highest praises before the people, left the assembly, and carried the centurion with him into the senate. There he was publicly thanked in the name of that august body, and the military tribunes, as a mark and reward of his valour and zeal, declared him Primpilus, that is, first officer of the first legion. The other centurions, renouncing their appeal, made no farther difficulty to enter into the service.

Nothing gives us a juster idea of the Roman character than facts of this kind. What a fund of good sense, equity, nobleness, and even greatness of soul does this soldier express! He speaks of his ancient poverty without shame, and of his glorious services without vanity. He is not improperly tenacious of a false point of honour. He modestly defends his rights, and renounces them. He teaches all ages not to contend with their country, nor to make the public good give place to their private interest; and is so happy, as to bring over all those in the same case, and associated with himself, into his opinion. How powerful is example! The good disposition of a single person is sometimes all that is necessary for reducing a multitude to reason.

ARTICLE III.

Preparations of War.

I shall include in this article what relates to provisions, the pay of soldiers, their arms, and some other cares necessary to be taken by generals before they begin to march.

SECT. I.

Of Provisions.

The order observed by the Romans in regard to provisions, is better known to us than that of the Greeks: the *questor* was charged with this care. The ration of corn for each soldier's daily

subsistence was very near the same with both people, that is to say, a *chaux*, or the eighth part of a Roman bushel; six of which went to the *Medimnus*. The *chaux* was also the usual daily allowance of a slave. A Roman soldier therefore in the foot had four bushels of wheat a month; which was called *menstruum*: that is to say, thirty-two *chaux*, which was something more than a *chaux* per day. The foot soldier of the allies had as much.

The Roman cavalry soldier received two *medimni* of wheat, or twelve bushels, a month, because he had two domestics, which amounted to fourscore and sixteen *chaux*, at the rate of something more than a *chaux* per man daily. This horseman had two horses, one for himself, and the other to carry his baggage, &c. For these two horses he received also monthly, seven *medimni* of barley, which make forty-two bushels, at the rate of one bushel, and a little more than three *chaux* a day for two horses. It was necessary for one of these horsemen to have a certain income, to support the unavoidable expenses he was at during the campaign; hence it sometimes happened that a citizen, though of a patrician family, was obliged by his poverty to serve in the foot.² The horsemen of the allies had a *medimnus* and one-third per month, that is to say, eight bushels of corn, because he had only one horse, and consequently but one servant; and five *medimni* of barley for that horse, which make thirty bushels, at the rate of one bushel a day. The quantity of wheat for the officers augmented in proportion to their pay, of which we shall speak in the sequel. The portion of corn was sometimes doubled to the soldiers by way of honour and reward, as appears from several passages in *Livy*.³

The public stores of corn, of which the *questors*, as I have said, had the care, were carried either in ships, in waggons, or by beasts of burthen: but the foot soldiers carried upon their shoulders the quantity of corn distributed to them for a certain time, which very much lessened the number of carriages.

Four bushels of wheat, which was the quantity of each soldier for a month, was a heavy load, without reckoning all that he had to carry besides.⁴ It is certain that they were sometimes

² *Magistrum equitum dicit L. Tarquitium patricium gentis, sed qui, cum stipendia pedibus propter paupertatem fecisset, bello tamen primus longè Romanæ juventutis habitus esset. Liv. l. lii. n. 27.*

³ *Milites, qui in presidio fuerant, duplici frumento in perpetuum; in presentia singulis bobus donati. Liv. 7. Hispanis duplicia cibaria dari jussit. Liv. 24.*

⁴ *The load which a Roman soldier carried is said to have amounted to about sixty pounds weight, independent of arms, which appears almost incredible when it is considered that he commonly marched twenty miles a day.—Ed.*

¹ *Et omnia honesta loca ducere, quibus remp. defensuri eritis.*

loaded with four bushels:⁵ but this undoubtedly was on extraordinary occasions, as upon a forced march, or a sudden expedition in the enemy's country. It is highly probable that they generally carried corn only for twelve, fifteen, or twenty days at most; and this weight diminished every day by the daily consumption.

It may be asked, why corn rather than bread was given to the troops. Perhaps this custom had been transferred from the city into the camp; for in the city the public distributions were made in corn, not in bread. Besides which, the weight of corn was lighter than that of bread. Pliny observes, that the weight of a bushel of wheat in grain augments exactly one third, when made into ammunition bread.⁶ This is a considerable difference. But it may be conceived to have been a very great trouble for the soldiers to make their own bread, to grind the corn, and afterwards to bake it; though they were divided into messes or chambers, called *Contubernia*, this seems to us a considerable difficulty. To judge rightly of it, however, we must imagine ourselves to live in the same times and countries with them, and consider the customs which then prevailed. The Roman soldier, employed in grinding the corn and baking the bread, did no more in the camp, than he had done every day in the city in times of peace. His meal supplied him with I know not what variety of dishes. Besides the common bread, he made a kind of soft boiled food of it, very agreeable to the troops: he mingled it with milk, roots, and herbs; and made pancakes of it upon a small plate laid over the fire, or upon the hot ashes, as was anciently the manner of regaling guests, and is still practised throughout the East, where these kind of thin cakes are much preferred to our best bread.

Upon certain occasions bread was distributed amongst the troops.⁷ When L. Quintius Cincinnatus was created dictator against the Æqui; he ordered all the youth capable of bearing arms to repair to the Campus Martius before sunset, with bread for five days, each of them with twelve palisades. He commanded such of the citizens as were of a more advanced age to bake bread for the young ones, whilst they were employed in preparing their arms, and providing themselves with stakes. This was chiefly

done when they were to embark,⁸ because there was not so much convenience on board the vessels for making bread, as on shore. But generally the soldier ground his corn himself, either in little mills, which he carried along with him, or upon stones; after which he baked his bread, not in ovens, but upon a fire, or under the ashes.

To the corn given the troops were added salt, herbs and roots, cheese, and sometimes bacon and pork. Their drink was answerable to this diet. The army very seldom used wine. Cato the elder drank nothing but water, except in great heats, when he only mixed it with vinegar.⁹ The use of this drink was common in the armies: it was called *posca*. Every soldier was obliged to have a bottle of it in his equipage. The emperor Pescennius forbade the use of any other drink in his army: *jussit vinum in expeditione neminem biberi, sed aceto univcrsos esse contentos*.¹⁰ The expression, *universos*, seems to imply that this prohibition was universal, and extended to the officers as well as soldiers. This drink (*posca*) was very good to quench the thirst immediately, and to correct the badness of the water which they might meet with upon their march. Hippocrates says, that vinegar is refreshing: *ἰσος ψυχρὰ*: for which reason it was given to reapers, and those who worked in the field.¹¹ Aristotle tells us,¹² that the Carthaginians, in time of war, abstained from wine.

I have heard say, that nothing gives persons in the army, who read the ancient history, so much difficulty, as the article of provisions; which difficulty is not without its foundation. We do not find, that either the Greeks or Romans had the precaution to provide magazines of forage, to lay up provisions, to have a commissary general of stores, or to be followed by a great number of carriages. We are amazed at what is said¹³ of the army of Xerxes king of Persia, which amounted, including the train and baggage, to more than five millions of souls; and for the subsistence of which, according to the computation of Herodotus, more than six hundred thousand bushels of wheat a day were requisite. How was it possible to supply such an army with so enormous a quantity of corn, and other necessaries in proportion? We must remember, that the same Herodotus¹⁴ had taken care to apprise us, that Xerxes had employed himself, during four years, in making prepara-

⁵ Consul menstruum jussu milite secum ferre profectus, decimo post die, quam exercitum acceperat, castra movit. *Liv.* l. xliv. n. 2.

⁶ Aquilejenses, nihil se ultra scire nec audere affirmare, quam triginta dierum frumentum militi datum. *Liv.* l. xliii. n. 1.

⁷ Lex certè naturæ, ut in quocunque genere pani militari tertia portio ad grani pondus accedat. *Plin.* xviii. c. 7.

⁸ *Liv.* l. iii. n. 27.

⁹ Ut socii navales decem dierum cocta cibaria ad naves deferrent. *Liv.* l. xxi. n. 40.

¹⁰ Cum triginta dierum coctis cibariis naves conscenderunt. *Liv.* l. xxiii.

¹¹ *Plut.* in Cat. p. 336.

¹² *Ruth* l. 14.

¹³ *Herod.* l. vii. c. 187.

¹⁴ *Spartan.*

¹⁵ *Econom.* l. i. c. 5.

¹⁶ *Ibid.* c. 50.

tions for this war. A considerable number of ships laden with corn and other provisions, always coasted near the land army, and were perpetually relieved by others, by the means of which it wanted nothing; the passage from the Hellespont to the Grecian sea, and the Island of Salamin being very short, and this expedition not of a year's continuance. But no consequence should be drawn from it, this being an extraordinary case, and one may say the only example of the kind. In the wars of the Greeks against each other, their armies were small, and accustomed to a sober life; they did not remove far from their own country, and almost always returned regularly every winter. So that it is plain, it was not difficult for them to have provisions in abundance, especially the Athenians, who were masters at sea.

As much may be said of the Romans, with whom the care of provisions was infinitely less weighty, than it is at present with most of the nations of Europe. Their armies were much less numerous, and they had a much smaller number of cavalry. A legion of four thousand foot made a body (after our manner) of six or seven battalions; and having only three hundred horse, they formed but two squadrons: so that a consular army of about sixteen thousand foot, including the Romans and their allies, was composed of very near twenty-five of our battalions, and had but eight or nine of our squadrons. In these days, to twenty-five battalions, we have often more than forty squadrons. What a vast difference must this make in the consumption of forage and provisions! They did not want four or five thousand horses for the train of artillery; with bakers and ovens, and a great number of covered waggons, each of four horses. Besides this, the sober manner of life in the army, confined to the mere necessities of life, spared them an infinite multitude of servants, horses, and baggage, which now exhaust our magazines, starve our armies, retard the execution of enterprises, and often render them impracticable. This was not the manner of living only of the soldiers, it was common to them with the officers and generals. Emperors themselves, that is to say, the lords of the universe, Trajan, Adrian,¹ Pescennius,² Alexander Severus,³ Probus, Julian,⁴ and many others,

not only lived without luxury, but contented themselves with boiled flour or beans, a piece of cheese or bacon, and made it their glory to level themselves, in this respect, with the meanest of the soldiers. It is easy to conceive of what weight such examples were, and how much they contributed to diminish the train of an army, to support the taste of frugality and simplicity amongst the troops, and banish all luxury and idle show from the camp.

It is not without reason, that all the authors I have cited at bottom observe, that those emperors affected to eat in public, and in the sight of the whole army. In *propatulo*—*Ante papilionem*—*Apertis papilionibus*—*Sub columellis tabernaculi*. This sight attracted, instructed, and consoled the soldier, and ennobled his poor diet to him, in its resemblance to that of his masters: *cunctis videntibus atque gaudentibus*. Let us compare an army of thirty thousand men, composed of such officers and soldiers as the Greeks and Romans had, robust, sober, seasoned, and inured to all sort of fatigues, with our armies of an hundred thousand men, and the pompous train that follows them; is there a general of the least sense or understanding, that would not prefer the former? It is with such troops the Greeks often checked the whole forces of the East; and the Romans conquered and subjected all other nations. When shall we return to so laudable a custom? Will there not some general of an army arise of superior rank and merit, and at the same time of a genius solid and sensible to true glory, who shall comprehend how much it is for his honour to show himself liberal, generous, and magnificent in sentiments and actions; to bestow his money freely for animating the soldiers, or to assist the officers, whose income does not always suit their birth and merit; and to reduce himself in all other things, I do not say to that simplicity and poverty of the ancient masters of the world, (so sublime a virtue is above our age's force of mind) but to an elegant and noble plainness, which, by the force of example, of great effect in those that govern, may perhaps suggest the same to all our generals, and reform the bad and pernicious taste of the nation?

The care of provisions always has been, and ever will be, highly incumbent upon a good general. Cato's maxim, that the war feeds the war,⁵ holds good in plentiful countries, and with regard to small armies: that of the Greeks is more generally true, that the war does not furnish provisions upon command, or at a fixed time. They must be provided, both for the present and the future. One of the principal instructions Cambyzes king of Persia gave his

1 Cibis etiam castronsibus in propatulo libenter utebatur (Adrianus) hoc est lardo, caseo, et posca. *Spartian.*

2 In omni expeditione (Pescennius) militare cibum sumpsit ante papilionem. *Spartian.*

3 Apertis papilionibus (Alexander) prandit atque coenavit, cum militum cibum, cunctis videntibus atque gaudentibus, sumeret. *Lampri.*

4 Et Imperatori (Juliano) non cupidie ciborum regio mere, sed sub columellis tabernaculi parvis conaturo pulvis portio parabatur exigua, etiam munifici fastidienda gregario. *Ammian.* l. xxv.

5 Bellum inquit Cato, seipsum alit. *Lie.* l. xxxiv. n. 9.

son Cyrus, who afterwards became so glorious, was, not to embark in any expedition, till he had first informed himself, whether subsistence were provided for the troops. Paulus Æmilius would not set out for Macedonia, till he had taken care of the transportation of provisions. If Cambyses and Darius had been as attentive in this point, they had not occasioned the loss of their armies, the first in Ethiopia, and the other in Scythia. That of Alexander had been famished, if the counsel of Memnon, the most able general of his times, had been followed, which was to lay waste a certain extent of country in Asia Minor, through which that prince was under the necessity of marching. Before the battle of Cannæ, Hannibal had not ten days' provisions: a delay of some weeks had reduced him to the last extremity. Cæsar before that of Pharsalia, must have perished for want of provisions, if Pompey would, or rather could, have waited ten or twelve days longer. Famine is an enemy, against whom the ability and valour of generals and soldiers can effect nothing, and whom the number of troops serves only to re-enforce.

SECT. II.

Pay of the soldiers.

Amongst the Greeks, the soldiers at first subsisted themselves in the field at their own expense. This was natural; because they were the citizens themselves, united to defend their lands, lives and families, and had a personal interest in the war.

The poverty, which Sparta long professed, gives reason to believe, that they did not pay their troops. As long as the Spartans remained in Greece, the republic supplied them with provisions for their public meals, and one habit yearly. Amongst these provisions there was some meat, and a particular officer had the distribution of it. We have seen Agesilaus to mortify Lysander, who had filled the highest offices of the republic, give him this office, which was of no consideration.* The Spartans, during the war, contented themselves with this allowance, adding to it some little plunder of the country for their better subsistence. After Lysander had opened the way for gold and silver to re-enter Sparta, and had formed a public treasury there, as the Lacedæmonians were often transported into Asia Minor out of their own country, the republic was no doubt obliged to supply them at such times with subsistence by particular aids. We have seen the younger Cyrus, at the request of Lysander, augment

the pay of those, who served on board the galleys of the Lacedæmonians, from three oboli,† usually paid them by the Persians, to four, which very much seduced the seamen from the Athenians. Sparta's strength was not maritime. Though it was washed by the sea upon the east and south, its coasts were not advantageous for navigation, and it had only the port of Gytheum, which was neither very large nor commodious; and indeed its fleets were not very numerous, and had scarce any seamen but strangers. It is not certainly known what pay Sparta gave her land troops, nor whether she supplied either the one or the other with provisions.

Pericles was the first that established a pay for the Athenian soldiers, who till then had served the republic without any. Besides its being very easy to conciliate the people's favour by this method, a more urgent motive obliged him to introduce that change. He made war at a distance in Thrace, in the Chersonesus, in the isles, and in Ionia, during several months together, without molesting or squeezing the allies. It was impossible for citizens, so long absent from their lands, trades, and other means of getting their bread, (for most of them were artisans, as the Lacedæmonians reproached them) to serve without some support. That was a justice the republic owed them, and Pericles acted less the part of a popular magistrate than that of an equitable judge. He only prevented, like a wise politician, the desires of the people in regard to a conduct, which was become necessary.

The usual pay of the mariners was three oboli, which made half a drachma, that is to say, fivepence French; that of the infantry four oboli, or sixpence halfpenny; and that of the cavalry, a drachma, tenpence. Good order had been established for supporting the expenses of the war. The four oldest and primitive tribes of Athens had increased to ten. At that time, for the payment of imposts, six-score citizens were drawn out of each tribe, which made twelve hundred in all; these were divided into four companies of three hundred, and into twenty classes; of which each were again divided into two parts, the one of the richer citizens, the other of such as were less so. The public expenses fell upon the rich and opulent, but upon some more than others. When any urgent and sudden necessity happened, that made it necessary to raise troops, or fit out a fleet, the expenses were divided amongst these citizens in proportion to their estates: the rich advanced the money, for the immediate service of the republic, and the others had time

* Plut. in Agesil. et Lysand.

† From fivepence to sixpence halfpenny.

allowed to reimburse them, and pay their quota. It appears from the example of Lamachus, who was sent with Nicias to command at the siege of Syracuse, that the Athenian generals served at their own expense.¹ Plutarch observes, that this Lamachus, who was very poor, not being in a condition to pay any thing towards the expenses of the war, sent an account to the people of what he had laid out upon his own person, in which his daily subsistence, clothes, and even shoes and stockings were included.

The Roman soldiers, in the earlier times of the republic, served without pay or recompense. The wars in those days were not very distant from Rome, and of no long duration. As soon as they were terminated, the soldiers returned home, and took care of their affairs, lands, and families. It was not till four hundred and forty years after the building of Rome, that the senate, upon occasion of the siege of Veii, which was very long, and continued without interruption during the winter, contrary to custom, decreed, without being requested, that the republic should pay the soldiers a fixed sum for the services they should render it.² This decree, the more agreeable to the people, as it appeared the pure effect of the senate's liberality, occasioned universal joy; and the whole city cried out, that they were ready to shed their blood, and sacrifice their lives, for so munificent a country. The Roman senate showed the same wisdom upon this occasion, as Pericles had done at Athens. The soldiers at first whispered, and at length openly vented their complaints and murmurs against the length of the siege, which laid them under the necessity of continuing remote from their families during even the winter, and by that long absence occasioned the ruin of their lands, which remained uncultivated, and became incapable of affording them subsistence. These were the real motives of the senate's conduct, who artfully granted that as a favour, which necessity was upon the point of extorting from them by the invectives of some tribune of the people, who would have made it an honour to himself. To answer this pay, a tax was laid upon the citizens in proportion to their estates.³ The senators set the ex-

ample, which was followed by all others, notwithstanding the opposition of the tribunes of the people. It appears that none were exempt from it, not even the augurs nor pontiffs.⁴ They evaded paying it during some years, by violent means, and their private authority. The questors cited them to appear and see themselves sentenced to pay the whole arrears due for that time. They appealed to the people, who condemned them. When wars were terminated, and considerable spoils had been taken from the enemy, part of them was applied in reimbursing the people the sums that had been raised for carrying them on:⁵ which is a very admirable, and very uncommon example of public faith. The tax, of which I speak, subsisted till the triumph of Paulus Æmilius over the Macedonians, who brought so great a quantity of riches into the public treasury, that it was thought proper to abolish it for ever.⁶

Though the soldiers usually served only six months, they received pay for the whole year, as appears from several passages in Livy: this was paid them at the end of the campaign; and sometimes from six months to six months. What I have hitherto said of pay, regards only the foot. It was also granted three years after to the horsemen during the same siege of Veii.⁷ The republic used to supply them with horses: they had been so generous, in a pressing necessity of the state, as to declare that they would mount themselves at their own expenses.

The pay of the soldiers was not always the same; it varied according to the times. It was at first only three *asses* a day for the foot: (something more than threepence French;) at that time there were ten *asses* to a *denarius*, which was of the same weight and value as the Grecian drachma. The *denarius* was afterwards raised to sixteen *asses*, in the 536th year of Rome, when Fabius was dictator, at which time the pay rose from three to fivepence.⁸ We ought not to be surprised at the smallness of this pay, when we consider the price of provisions. Polybius informs us, that in his time the bushel of wheat was usually sold for four *oboli*, or sixpence halfpenny French, and the bushel of barley for half that price.⁹ A bushel of wheat was sufficient for a soldier for eight days. Julius Cæsar, to confirm the soldiers the more strongly in his interest, doubled their pay, and made it amount to tenpence: *Legionibus stipendium in perpetuum duplicavit.*¹⁰

¹ Plut. in Nic. p. 533.

² Additum deinde, omnium maximè tempestivo principum in multitudinem munere, ut ante mentionem ullam plebis Tribunorumve decerneret senatus, ut stipendium miles de publico acciperet, cum ante id tempus de suo quisque functus eo munere esset. Nihil acceptum unquam a plebe tanto gaudio traditur. Concursum itaque ad Curiam esse, prehensatasque; executionum inanum, et patres vere appellatos, effectum esse fatentibus, ut nemo pro tam munifica patria, donec quicquam vicium superasset, corpori aut sanguini suo parceret. *Liv. l. iv. n. 50.*

³ *Liv. l. iv. n. 60.*

⁴ *Liv. l. xxxiii. n. 42.*

⁵ Dion. Halicarn. in Excerpt. Legat. p. 747.

⁶ Plut. in P. Æmil. p. 273.

⁷ Equiti certus numerus aris est assignatus. Tum primum equis (suis) mercede Equites caperunt. *Liv. l. v. n. 7.*

⁸ Plin. l. xxxiii. c. 3.

⁹ Polyb. l. xiii. p. 103.

¹⁰ Sueton. J. Cæs. c. 36.

There were other alterations in it under the emperors: but I do not think it necessary to enter into the detail of them.

Polybius, after having said that the daily pay of the foot was (at first) something more than two oboli, or threepence, adds, that the centurions had four oboli, or sixpence halfpenny, and the horse six oboli, or tenpence. Taking the daily pay at fivepence, which was the usual pay in Polybius's time, the sum total yearly amounted to almost an hundred livres, without including the ration of corn and other provisions, with which they were daily supplied. I take the year as twelve months, each of thirty days, which amounts to three hundred and sixty days; and it appears that it was sometimes taken in this manner, in regard to the pay of troops. Out of this annual sum, a part was reserved for their clothes, arms, and tents. This Tacitus tells us: *Enimvero militiam ipsam gravem, infructuosam; deus in diem assibus animam et corpus aestimari. Hinc vestem, arma, tentoria.*¹¹ And Polybius adds corn to it: *Non frumentum, non vestem, nec arma gratuita militi fuisse; sed certa horum pretia de stipendio quæstore deducta.*

As to what regards the great officers, consuls, proconsuls, lieutenants, prætors, proprætors, and quæstors, it does not appear, that the republic paid them for their services in any other manner, than by the honour annexed to these offices. She supplied them with the necessary and indispensable disbursements of their commission: robes, tents, horses, mules, and all their military equipage. They had a certain fixed number of slaves, which was not very great, and which they were not at liberty to augment, the law admitting them to take new ones only in the room of such as died. In the provinces through which they passed, they exacted nothing but forage for their horses, and wood for themselves from the allies. And those who piqued themselves upon imitating the entire disinterestedness of the ancients, took nothing from them. Cicero acted in this manner, as he himself tells Atticus in a letter. "The people are at no expense," says he, "either for me, my lieutenants, the quæstor, or any other officer. I accept neither of forage nor wood, though permitted by the Julian law. I only consent that they supply my people with an house and four beds; though they often lodge in tents."¹² It was of the spirit of the Roman government not to

suffer their generals or magistrates to be a charge to their allies. It was this conduct, so full of wisdom and humanity, that rendered the authority of the Romans so venerable and amiable; and it may be said with truth, that it contributed more than their arms, to render them masters of the universe.

Livy tells us¹³ the name of him who first infringed the Julian law, which regulated the expenses, that might be exacted from the allies; and his example had but too many followers, who in a short time exceeded him. This was L. Posthumus. He was angry with the inhabitants of Præneste, because during some stay he had made there when a private person, they had not treated him with the respect he believed his due. When he was elected consul, he thought of revenge. Being to pass through that city to his province, he let them know, that they must send their principal magistrates to meet him, to provide him lodging in the name, and at the expense of the public, and to have the beasts of burthen that were necessary, in readiness against his departure. Before him, says Livy, no magistrate had ever put the allies to any expense, nor exacted any thing from them. The republic supplied them with mules, tents, and all the carriages necessary to a commander, in order to prevent their taking any thing from the allies. As hospitality was very much honoured and practised in those times, they lodged with their particular friends, and took great pleasure in receiving them at Rome in their turn when they came thither. When they sent lieutenants upon any sudden expedition, the cities through which they passed received orders to supply them with a horse, and nothing more. Though the consul might have had a just cause of complaint against the people of Præneste, he ought not to have used, or rather abused the authority of his office, to make them sensible of it.¹⁴ Their silence, whether the effect of moderation or excessive timidity, prevented them from laying their complaints before the Roman people, which imboldened the magistrates from thenceforth to make that new yoke heavier every day; as if impunity in the first instance had implied the approbation of Rome, and had given them a kind of right to act the same thing. The ancient Romans, far from behaving in this manner, or endeavouring to enrich themselves at the expense of the allies, had no thoughts but of protecting and defending them. They believed themselves sufficiently paid by the glory of their

¹¹ Anal. l. i. c. 17.

¹² Nullus sit sumtus in nos, neque in legatos, neque in quæstorem, neque in quemquam. Scito non modo nos fœrum aut quod lege Julia dari solet, non accipere; sed ne higna quidem, nec præter quatuor lectos et tectum quemquam accipere quidquam; multis locis ne tectum quidem, et in tabernaculo, manere plerumque. *Epist. 16. lib. v. ad Attic.*

¹³ Liv. l. xlii. n. 1.

¹⁴ Injuria (the sense requires *ira* to be read) consulis etiam justa, non tamen in magistratu exereenda, et silentium nimis aut modestum aut timidum Prænestinorum, jus velut probato exemplo magistratibus fecit graviorum in dies talis generis imperiorum. *Id.*

exploits: and often after great victories and illustrious triumphs, died in the arms of poverty, as they had lived. The Grecian and Roman histories abound with examples of this kind.

SECT. III.

Ancient Arms.

It is not my design in this place to describe all the various kinds of arms used by the soldiery of all nations. I shall confine myself principally, according to my custom, to those of the Greeks and Romans, who, in this respect, had many things common to both. The Romans had borrowed the use of most of them from the Tuscans and Greeks, who inhabited Italy. Florus observes, that Tarquinius Priscus, who was descended from the Corinthians, introduced abundance of the Grecian customs at Rome.¹

Armour was anciently of brass, and afterwards of iron. The poets often take the one for the other. The armour of the Greeks, as well as that of most other nations, was, in the earliest ages, the helmet, the cuirass, the shield, the lance, and the sword. They used also the bow and the sling.

The helmet was a defensive armour for the head and neck. It was either of iron or brass, often in the form of the head, open before, and leaving the face uncovered. There were head-pieces that might be let down to cover the face. Upon the top of them they placed figures of animals, lions, leopards, griffins, and others. They adorned them with plumes of feathers, which floated in the wind, and exalted their beauty.

The cuirass was called in Greek *θώραξ*, a name which has been adopted into the Latin, that language, however, more frequently uses the word *lorica*. At first cuirasses were made either of iron or brass, in two pieces, as they are in these days: these two pieces were fastened upon the sides by buckles. Alexander left the cuirass only the two pieces which covered the breast, that the fear of being wounded in the back, which had no defence, might prevent the soldiers from flying.² There were cuirasses of so hard a metal, that they were absolutely proof against weapons. Zoilus, an excellent artist in this way, offered two of them to Demetrius, surnamed Poliorcetes.³ To show the excellency of them, he caused a dart to be discharged at them out of the machine, called a catapulta, at the distance of only twenty-six paces. How violently soever the dart was shot, it made no

impression, and scarce left the least mark upon the cuirass.

Many nations made their cuirasses of flax or wool: these were coats of arms made with many folds, which resisted, or very much broke, the force of blows. That with which Amasis presented the Lacedæmonians, was of wonderful workmanship, adorned with figures of various animals, and embroidered with gold.⁴ What was most surprising in this cuirass, was, that every thread in it, though very small, was composed of three hundred and sixty smaller, which it was not difficult to distinguish.

I have said that the cuirass was called *lorica* in Latin. This word comes from *lorum*, a thong or strap of leather, because made of the skin of beasts. And from the French word *cuir* also *cuirass* is derived. The cuirass of the Roman legions consisted of thongs, with which they were girt from the armpits to the waist. They were also made of leather, covered with plates of iron, in the form of scales, or of iron rings twisted within one another in the form of chains. These are what we call coats of mail, in Latin, *lorica hamis conserta*, or *hamata*. With the *thorax* of the Greeks the soldier was much less capable of motion, agility, and force: whereas the girts of leather, successively covering each other, left the Roman soldier entire liberty of action, and fitting him like a vest, defended him against darts.

The buckler was a defensive piece of armour, proper to cover the body. There were different sorts of them. The *scutum*, *θυρεός*, or *ενακος*. The shield, was a long buckler, and sometimes of so immoderate a size, that it would cover a man almost from head to foot. Such were those of the Egyptians mentioned by Xenophon. It must have been very large amongst the Lacedæmonians, as they could carry the body of one who had been killed upon it.⁵ From whence came the celebrated injunction of a Spartan mother to her son, when he set out for the war: "H *εὖς*, ἢ *ὀλίγος* *τάς*, that is to say, Either bring back this buckler, or return upon it. It was the greatest disgrace to return from battle with the loss of the buckler; undoubtedly, because it seemed to argue, that the soldier had quitted it to fly the more easily, without regard to any thing but saving his life. The reader may remember, that Epaminoudas, mortally wounded in the celebrated battle of Mantinea, when he was carried off into his tent, asked immediately with concern and emotion, whether his buckler were safe.

The *clypeus*, *δωρίς*, is often confounded with the *scutum*. It is, however, certain, that they were different; because in the *census*, or muster,

¹ Tarquinius Priscus—oriundus Corintho, Græcum ingenium Italicis artibus miscuit. Flor. l. i. c. 5.

² Polyæn. Stratag. l. iv. ³ Plut. in Demetr. p. 508.

⁴ Herod. l. iii. c. 47.

⁵ Cyrop. l. vii. p. 178.

made by Servius Tullius, the *clypeus*, is given to those of the first class, and the *scutum* to those of the second. And in fact the *scutum* was long and square: the *clypeus* round and shorter. Both had been used by the Romans in the time of the kings. After the siege of Veii,⁶ the *scutum* became more common. The Macedonians always made use of the *clypeus*, except perhaps in later times.⁷

The buckler of the Roman legions was convex, and in the form of a gutter-tile. According to Polybius it was four feet long, and two and a half broad. These bucklers were anciently made of wood, says Plutarch,⁸ in the Life of Camillus: but this Roman general caused them to be covered with plates of iron, to make them a better defence against blows.

The *Parma* was a small round buckler, lighter and shorter than the *scutum*, used by the heavy armed infantry. The light armed foot and the cavalry had this shield. The *Pelta*, was almost the same thing with that called *cetra*. This buckler was light, in the form of a half moon or semicircle on the top.

The *Sword*. The forms of it were very different and in great number: I shall not amuse the reader with describing them; but content myself with remarking, that there were long swords without points, which served to strike with the edge, as were those of the Gauls, of which we shall soon speak.⁹ There were others shorter and stronger, which had both point and edge, *punctum et cæsim*, such as the Spanish sabres were, which the Romans borrowed from them, and used ever after with advantage. With these sabres they cut off arms, and heads, and made most horrible wounds, at one blow.¹⁰ The manner, in which the sword was worn by the ancients, was not always alike. The Romans generally wore it on the right thigh, to leave room, without doubt, for the moving of the buckler with more freedom, which was on the left side: but, in certain remains of antiquity, we see that their soldiers wore them on the left. It is remarkable, that neither the Greeks nor Romans, the two most warlike

nations of the world, wore swords in times of peace; nor was duelling known amongst them.

PIKES or *LANCES* were used by almost all nations. Those which we see upon the monuments made in the times of the Roman emperors, are about six feet and a half long, including the iron point.

The *Sarisa* of the Macedonians was of so prodigious a length, that one could scarce believe such a weapon could be used, if all the ancients did not agree in this point. They give it a length of sixteen cubits, which makes eight yards.

Bows and *Arrows* are of the most remote antiquity. There were few nations, who did not use them. The Cretans were esteemed excellent archers. We do not find that the Romans used the bow in the earliest times of the republic. They introduced it afterwards; but it appears, that they had scarce any archers, except those of the auxiliary troops.

The *SLING* was also an instrument of war much used by many nations. The Balearians, or the people of the islands now called Majorca and Minorca, excelled at the sling. They were so attentive in exercising their youth in the use of it, that they did not give them their food in the morning till they had hit a mark.¹¹ The Balearians were very much employed in the armies of the Carthaginians and Romans, and greatly contributed to the gaining of victories. Livy mentions some cities of Achaia, Egium, Patræ, and Dymæ, whose inhabitants were still more dexterous at the sling than the Balearians.¹² They threw stones farther, and with greater force and certainty, never failing to hit what part of the face they pleased. Their slings discharged the stones with so much force, that neither buckler nor head-piece could resist their impetuosity; and the address of those who managed them was such, according to the scripture, that they could hit a hair, without the stones going either on one side or the other.¹³ Instead of stones they sometimes charged the sling with balls of lead, which it carried much farther.

JAVELINS. There were two sorts of them, which are: 1. *ῥεῖστρος*: *hasta*. I call it javelin. It was a kind of dart not unlike an arrow, the wood of which was generally three feet long, and one inch thick. The point was four inches long, and tapered to so fine an end, that it bent

6 Clypeis antea Romani usi: deinde, postquam facti sunt stipendiarii, scuta pro clypeis fecere. *Liv.* l. viii. n. 8.
7 Arma, clypeus, sarissæque illis (Macedonibus:) Romano scutum, majus corpori tegumentum. *Liv.* l. ix. n. 19.

8 Plut. in Cam. p. 150.

9 Gallis, Hispanisque scuta ejusdem formæ fere erant, dispersæ ac dissimiles gladii. Gallia prælongi, ac sine mucronibus: Hispano, punctum magis quam cæsim assuetum petere hostem, brevitate habiles, et cum mucronibus. *Liv.* l. xxii. n. 46.

10 Gladio Hispaniis detruncata corpora brachiis abscissis, aut tota cervicè desecta, divisa à corpore capita, patentisque viscera, et feditatem aliam vulnerum viderunt. *Liv.* l. xxxi. n. 34.

11 Veget. de re milit. l. i. c. 16.

12 Longius, certiusque, et validiore ictu quam Balearis funditor, eo telo usunt—Non capita solum hostium, vulnerabant, sed quem locum destinassent oris. *Liv.* l. xxxvii. n. 29.

13 Among all this people there were seven hundred men left-handed, every one could sling stones at an hair-breadth, and not miss. *Judg.* xx. 16.

at the first stroke in such a manner, as to be useless to the enemy. The light armed troops used it. They carried several javelins in their left hand, with which they held their buckler, in order to have the right free, either to dart javelins at a distance, or to use the sword.¹ Livy gives each of them seven javelins.² *Terris: Pili.* I call this the *great javelin*,³ because thicker and stronger than the other. The legions darted it at the enemy, before they came to close fight. When they had neither time nor room they threw it upon the ground, and charged the enemy sword in hand. The CAVALRY had almost the same arms as the foot: the helmet, the cuirass, the sword, the lance, and a smaller or lighter buckler.

We see in Homer, that in the Trojan war the most distinguished persons rode on chariots drawn by good horses, with an esquire or charioteer, in order to charge through battalions with the greater vigour, and to fight with more advantage from them. But people were soon undeceived in these points, by the double inconvenience of being stopt short by hedges, trenches and ditches; or remaining useless in the midst of the enemy, when the horses were wounded. The use of chariots armed with scythes was afterwards introduced. These were placed in the front of the battle, to begin it by breaking the enemy. This manner of fighting was at first in great use amongst all the people of the East, and was believed decisive with regard to victory. The people who excelled most in the art of war, as the Greeks and Romans, did not adopt it; finding by experience, that the cries of the troops attacked in this manner, the discharges of the light armed soldiers, and still more than either, the unevenness of the ground, rendered all the equipage of these chariots ineffectual, and often even pernicious to those who employed them.

The nations who had elephants amongst them, as those of the East and Africa, believed that those animals, no less docile than terrible from their force and enormous size, might be of great use to them in battles. Accordingly, when instructed and guided with art, they did them great service. They carried their guides upon their backs, and were usually placed in the front of their armies. Advancing from thence, they

broke the closest ranks with an impetuosity that nothing could resist, crushed whole battalions with their vast weight, and diffused universal terror and disorder. To improve their effect, towers were placed on their backs, which were like portable bastions, from the tops of which chosen troops discharged darts and javelins upon the enemy, and completed their defeat. This custom subsisted long amongst the nations I speak of, from whom it passed to other people, who had learnt by fatal experience, how capable those animals were of contributing to victories. Alexander having conquered the nations subject to the Persian empire and afterwards India, began to make use of elephants in his expeditions; and his successors, in their wars with each other, rendered the use of them very common. Pyrrhus transported some into Italy; and the Romans learnt of that general, and afterwards of Hannibal, the advantage to be made of them in a day of battle. It was in the war against Philip, that they used them for the first time.⁴ But this advantage, great as it appeared, was balanced by inconveniences that at length made them disapprove of the use of elephants. The generals, instructed by experience, rendered the attack of those beasts ineffectual, by ordering their troops to open and give them free passage. Besides this, the frightful cries of the enemy's army, joined with a hail of darts and stones, discharged on all sides by the archers and slingers, put them into confusion, made them mad and furious, and often obliged them to turn upon their own troops, and commit the havoc amongst them intended against the enemy. At such times he who guided the elephant, was obliged, for avoiding that misfortune, to plunge an iron spike into their heads, upon which they fell dead immediately.⁵

Camels, besides being employed to carry, were also of service in battles. They had this convenience in them, that in dry and sandy countries they could support thirst with ease.⁶ Cyrus made great use of them in the battle against Cræsus, and they contributed very much to the victory he gained over him, because the horses of the latter, not being able to support the smell of them, were immediately put into disorder. We find in Livy,⁷ the Arabian archers mounted on camels with swords of six feet long, to reach the enemy from the high backs of those animals. Sometimes two Arabian archers sat back to back upon the same camel, in order to be able, even in flying, to discharge their darts and arrows against their pursuers.

¹ Ex cum cominus venerant, gladiis a velitibus trucidabantur. Hic miles tripedalem parmam habet, et in dextra hastas, quibus eminus utitur.—Quod si pede collato pugnamus est, translatis in levam hastis, stringit gladium. *Liv. l. xxxviii. n. 21.*

² Eis parmæ breviores quam equestres, et septena jacula quaternos longa pedas data, præfixa ferro, quæ hastis velitaribus inest. *Liv. l. xxvi. n. 4.*

³ Arma Romano scutum—et pilum haud paulo quam hasta vehementius lota miseroque telum. *Liv. l. ix. n. 12.*

⁴ Consul in aciem descendit, ante signa prima locatis elephantis: quo auxilio tum primum Romani, quia captos aliquot bello Punico habebant, usi sunt. *Liv. l. xxxi. n. 36.*

⁵ *Liv. l. xxvii. n. 49.*

⁶ Veget. l. iii. c. 23. Xenoph. in Cyrop. l. vii. p. 178.

⁷ *Liv. l. xxxvii. n. 40.*

Neither the elephants nor camels were of any service in armies, in comparison with that of the horse. That animal seems designed by nature for battles. There is something martial in his air, his chest, his pace, as Job so well observes in his admirable description of him.⁸ In many countries, the horse as well as horsemen were entirely covered with armour of iron: these were called *cataphracti equites*. But what is hard for us to comprehend, amongst all the ancient nations, the horse had neither stirrups nor saddle; and the riders never used boots. Education, exercise, and habit, had accustomed them not to need those aids; and even not to perceive that there was any occasion for them. There were some horsemen, such as the Numidians, who did not know so much as the use of bridles to guide their horses, and who, notwithstanding, by their voice only, or the use of the heel or spur, made them advance, fall back, stop, turn to the right or left; in a word, perform all the evolutions of the best disciplined cavalry. Sometimes, having two horses, they leaped from one to the other even in the heat of battle, to ease the first when fatigued. These Numidians, as well as the Parthians, were never more terrible, than when they seemed to fly through fear and cowardice. For then, facing suddenly and unexpectedly about, they discharged their darts or arrows upon the enemy and fell upon them with more impetuosity than ever.

I have related hitherto what I found most important concerning the arms of the ancients. In all times the great captains had a particular attention to the armour of their troops. They did not care whether they glittered or not with gold and silver; they left such idle ornaments to soft and effeminate nations, like the Persians. They preferred a more lively and martial brightness, one that might inspire terror, such as was that of steel and brass.⁹ Nor was it only the brightness, but the quality of the arms in particular, to which great generals were attentive. The ability of Cyrus the Great, was justly admired,¹⁰ who, upon his arrival at the camp of his uncle Cyaxares, changed the arms of his troops. Most of them used almost only the bow and javelin, and consequently fought only at a distance; a kind of fight, wherein the greater number had easily the superiority. He armed them with bucklers, cuirasses, and swords or axes, in order to their being in a condition to come to close fight immediately with the enemy, whose multitude thereby became useless. Iphicrates, the celebrated general of the Athenians, made

several useful alterations in the armour of the soldiers, in regard to their shields, pikes, swords, and cuirasses. Philopœmen also, as I have observed in its place, changed the armour of the Achæans, which before him was very defective;¹¹ and that alteration did not a little contribute to render them superior to all their enemies. There are many examples of this kind, which it would be too long to repeat here, that show, of what advantage to an army is the ability of a general, when applied to reforming whatever may be defective, and how dangerous it is tenaciously to retain customs established by length of time, without daring to make any alterations in them, however judicious and necessary. No people were ever more remote from this scrupulous attachment than the Romans. Having attentively studied what their neighbours and enemies practised, they well knew how to apply it to their own advantage; and by the different alterations they introduced in their armies, as well with regard to their armour, as whatever else related to military affairs, they rendered them invincible.

ARTICLE IV.

SECT. I.

Preliminary cares of the General.

All that we have seen hitherto, the raising of troops, their pay, their arms, their provisions, is in a manner only the mechanism of war. There are still more important cares that depend upon the general's ability and experience.

Those who have distinguished themselves most in the knowledge of military affairs, have always believed it particularly incumbent on the general to settle the plan of the war; to examine whether it is most necessary to act upon the offensive or defensive; to concert his measures for the one or the other of these purposes; to have an exact knowledge of the country into which he marches his army; to know the number and quality of the enemy's troops; to penetrate, if possible, his designs; to take proper measures at distance for disconcerting them; to foresee all the events that may happen, in order to be prepared for them; and to keep all his resolutions so well disguised and so secret, that no part of them escapes him and takes air. In this last point, perhaps, nothing was ever better observed than amongst us, in the war lately terminated, (1736,) which is not a little for the honour of the ministry and officers.

We have seen in the war against Persens, the wise precautions taken by Paulus Emilius,¹² before opening the campaign, that nothing might

⁸ Job xxxix. 19—25.

⁹ Macedonum dispar acies erat; equis virisque, non auro, non discolori veste, sed ferro atque ære fulgentibus.

¹⁰ Curt. l. iii. c. 3.

¹¹ Xenoph. Cyrop. l. ii. p. 40.

¹² Plut. in Philop. p. 360.

¹³ Liv. l. xlv. p. 18.

be wanting to the success of it; which precautions were the principal cause of his conquering that prince. It is upon these preliminary provisions the success of enterprises depends. And it was by adopting them that Cyrus commenced his career, as soon as he arrived in the camp of his uncle Cyaxares, who had not thought of taking any such measures.

It is amazing to consider the orders given by the same Cyrus, before he marched against the enemy; and the immense detail into which he entered with respect to all the necessities of the army. He was to march fifteen days through countries that had been destroyed, and in which there were neither provisions nor forage: he ordered enough of both for twenty days to be carried, and that the soldiers, instead of loading themselves with baggage, should exchange that burden for an equal one of provisions; without troubling themselves about beds or coverlids for sleeping, the want of which their fatigue would supply. They were accustomed to drink wine; and to prevent the sudden change of their drink from making them sick, he ordered them to carry a certain quantity with them, and to use themselves by degrees to do without it, and to content themselves with water. He advised them also to carry salt provisions along with them, handmills for grinding corn, and medicines for the sick: to put into every carriage a sickle and a mattock, and upon every beast of burden an axe and a scythe, and to take care to supply themselves with a thousand other necessities. He carried also along with him smiths, shoemakers, and other workmen, with all manner of tools used in their trades. For the rest, he declared publicly, that whoever would charge himself with the care of sending provisions to the camp, should be honoured and rewarded by himself and his friends; and even if they wanted money for that service, provided they would give security, and engage to follow the army, he would assist them with it. A detail of this kind, part of which I have omitted, is not unworthy of a general, nor a great prince, as Cyrus was.

We see in Pericles's harangue to the Athenians,¹ in regard to the Peloponnesian war, how much that great man, who administered the affairs of his republic with so much wisdom, excelled in the science of war, and how vast and profound his foresight was. He regulated the plan of the war, not only for one campaign, but for its whole duration, and settled it upon the perfect knowledge he had himself, and imparted to the Athenians, of the Lacedæmonian forces. He determined them to shut themselves up within their walls, and to suffer their lands to

be ruined, rather than hazard a battle against an army much more numerous than their own; whilst, on his side, he went with a fleet to ravage the whole coast of Peloponnesus. He recommended to them especially not to form any enterprises abroad, and not to think of any new conquests, upon which conditions he assured them of victory. It was from despising this advice, and carrying their arms into Sicily, that the Athenians were ruined.

Was there ever any thing more wise or better concerted than Hannibal's plan of attacking the Romans in their own country? He proposed the same design to Antiochus, which would have distressed the Romans exceedingly, had he followed it: but that prince had neither sufficient extent of mind, nor discernment enough to comprehend its whole advantage and wisdom. Alexander had perhaps been stopped short, reduced by famine, and obliged to retreat into his own kingdom, if Darius, as we have observed above, had destroyed the country through which his army was to pass, and had made a powerful diversion in Macedonia, as Memnon, one of his generals, and one of the greatest captains of antiquity, advised him. To form such plans is not to make war from day to day, and in a manner by chance, and to wait till events determine us; but to act like a great man, and with a thorough knowledge of the matter we have in hand. Enterprises concerted with so much wisdom, seldom fail of success.*

SECT. II.

Departure and March of the Troops.

The beginning and end of the war, the departure and return of the troops, were always solemnized by public acts of religion and sacrifices.² The reader undoubtedly remembers, that in the advice, Cambyzes, king of the Persians, gave his son Cyrus, when he set out for his first campaign, he insisted principally upon the necessity of not undertaking any action great or small, either for himself or others, without having first consulted the gods, and offered sacrifices to them. He observed this counsel with surprising exactness.³ When he arrived upon the frontiers of Persia, he sacrificed victims to the gods of the country, and to those of Media, as soon as he entered it, to implore their aid, and that they would be propitious to him. His historian is not ashamed to repeat in many places, that this prince took great care, upon all occasions, to discharge this duty, upon which he

2 Qui victoriam cupit, milites imbuat diligenter. Qui secundos optat eventus, dimicet arte, non casu. *Veget. l. iii. In Prælogo.*

3 Xenoph. in *Cyrop.* l. I.

4 *Ibid.* l. II.

1 Thucyd. l. ix.

made the whole success of his enterprises depend. Xenophon himself, a warrior and philosopher, never engaged in any important affair, without having first consulted the gods. All Homer's heroes appear very religious, and have recourse to the divinity on all occasions and dangers. Alexander the Great did not quit Europe and enter Asia, without having first invoked the divinities of both. Hannibal, before he engaged in the war against the Romans, went expressly to Cadiz, to acquit himself of the vows he had made to Hercules, and to implore his protection by new ones, for the success of the expedition he had undertaken.³

The Greeks were very religious observers of this duty. Their armies never took the field without being attended by aruspices, sacrificers, and other interpreters of the will of the gods, of which they believed it their duty to be assured before they hazarded a battle.

But of all the nations of the world, the Romans were the most exact in their recourse to the divinity, either in the beginning of their wars, in the great dangers to which they found themselves sometimes exposed, or after their victories; and ascribed the success of their arms solely to the care they had taken to render this homage to their gods.⁴

They were mistaken in the object, not the principle; and this universal custom of all nations shows, that they always acknowledged a supreme and Almighty Being, who governed the world, and disposed at his will of all events, and in particular of those of war, attentive to the prayers and vows addressed to him.

March of the Army.

When every thing was ready, and the army assembled at the time and place fixed, it began to march. To avoid prolixity, I shall speak only of the Romans in this place: from whence the reader may form a judgment of other nations.

It is amazing to consider the loads under which the soldiers marched. Besides their arms, says Cicero,⁷ the buckler, the sword, the helmet, (the javelins, or half-pikes, might

be added,) besides these arms which they considered no more as a burden than their limbs, for they said their arms were in a manner a soldier's members; they carried provisions for several days, and sometimes for three weeks or a month, with all the implements for dressing their food, and each a stake or palisade of considerable weight. Vegetius⁸ recommends the exercising young soldiers, in carrying a weight of above five and forty pounds, a day's march in the usual pace of the army, in order to their being accustomed to it against times of occasion and necessity. And this was the practice of the ancient Roman soldiers.⁹

The usual march of the Roman army, according to Vegetius,¹⁰ was twenty thousand paces a-day; ¹¹ that is to say, at least six leagues, allowing three thousand paces to each league. Three times a month, to accustom the soldiers to it, the foot as well as horse were obliged to take this march. By an exact calculation of what Caesar relates of a sudden march, which he made at the time he besieged Gergovia, we find that in four and twenty hours he marched fifty thousand paces.¹² This he did with the utmost expedition. In reducing it to less than half, it makes the usual day's march of six leagues. Xenophon¹³ regularly sets down the days' marches of the troops, who returned into Greece after the death of the younger Cyrus, and made the fine retreat, so much celebrated in history. All these marches, one with the other, were six parasangas,¹⁴ that is to say, more than six of our leagues. The usual marches of our armies are far from being so long; and it is not easy to comprehend how the ancients made them so. Their measures have varied very much, which perhaps is the reason of this difference between their day's march and ours.

The consul and even the dictator, marched at the head of the legions on foot, because the greatest force of the Romans consisting in the

8 Pondus quoque bajulare usque ad 60 libras et iter facere gradu militari, frequentissimè cogendi sunt juniores, quibus in arduis expeditionibus necessitas imminet annonam pariter et arma portandi. *Veget.* l. i. c. 19.

9 Non secus ac patriis acer Romanus in armis
Injusto sub facie viam cum carpit, et hosti
Ante expectatum postis stat in agmine castris.
Virg. Georg. l. iiii.

As when the warlike Roman under arms,
Charg'd with a baggage of unequal weight,
Pursues his march, and unexpected stands
Pitching his sudden tent before the foe.—*TRAP.*

10 *Veget.* l. i. c. 27.

11 Militari gradu viginti millia passuum horis duntaxat quinque aestivis conficienda sunt. *Veget.* l. i. c. 9.

12 *De bell. Gall.* l. vii.

13 *Xenophon. de Exped. Cyr.* l. vii. p. 487.

14 The Parasanga was a Persian measure of the ways. The least consisted of thirty stadia, each stadium of a hundred and twenty-five geometrical paces.

5 *Liv.* l. 21. n. 21.

6 Ejus belli (contra Annibalem,) causâ supplicatio per urbem habita, atque adorati dii, ut bene ac feliciter eveniret quod bellum populus Romanus jussisset. *Liv.* l. xxi. n. 17.

Civitas religiosa, in principiis maximè novorum bellorum, supplicationes habuit. *Id.* l. 31. n. 9.

7 Nostri exercitus primùm unde nomen habeant, vides. Deinde qui labor, quantus agminis! ferre plus dimidiati mensis cibaria, ferre si quid ad usum velint, ferre vallum: nam scutum, gladium, galeam in onere nostri milites non plus numerant quam humeros, lacertos, manus. Arma enim, membra militis esse ducunt; quæ quidem ita gerunt aptè, ut, si usus foret, abjectis oneribus, expeditis armis, ut membris, pugnare possint. *Cic. Tusc.* l. ii. n. 37.

infantry, they believed it necessary for the general to remain always at the head of the battalions. But as age or infirmity might disable the dictator to support that fatigue, before he set out for the army, he applied to the people to demand a dispensation from observing that law established by ancient custom, and permission to ride on horseback.¹ Suetonius represents Julius Cæsar as indefatigable, marching at the head of his armies, sometimes on horseback, but generally on foot, and bareheaded, however the sun shined, or how hard soever it rained.² Pliny praises Trajan, for having accustomed himself early to march on foot at the head of the legions under his command; without ever using either chariot or horse, though he had immense countries to traverse; and he always did the same after he became emperor.³ Cæsar, of whom I spoke just before, either swam or forded rivers. It was in order to be able to do the same, and to support all the fatigues of war, that the young Romans exercised themselves in horse and foot races, and all covered with sweat after such violent exercises, threw themselves into the Tiber, and swam over it. Care was taken to form those for several years that were to recruit the legions, and had not served before. For this purpose they made choice of the most healthy, the most active, and the most robust. They were exercised by fatigues, marches, and toils, which were gradually increased; and such as experience showed to be unequal to this discipline were dismissed, and only tried soldiers retained, who formed a body of chosen troops. It was this manly, hard, and robust education, which at Rome, and long before at Sparta, and in Persia, in the time of Cyrus, made the soldiery indefatigable and invincible.

SECT. III.

Construction and Fortification of the Camp.

I suppose the army upon a march. Though it were still in the territory of Rome, and had only one night to pass in a place, it encamped in all the forms, with no other difference, than that the camp was less fortified there perhaps than in the enemy's country. From thence comes this manner of speaking so usual in Latin authors, *primis castris, secundis castris*, &c. at the first camp, at the second camp; to signify the first

or second day's march; because, however short their stay was to be in a place, they never failed to form a camp in it. They called it *stativa*, when they were to stay several days in it: *sed plures dies stativa habuit*.⁴

This exactness of the Romans in their own country, sufficiently intimates their strictness when in sight of, or near, the enemy. It was a law amongst them, established by long custom, never to hazard a battle, till they had finished their camp. We have seen Paulus Emilius suspend and arrest the ardour of his whole army to attack Perseus, for no other reason, but because they had not formed their camp. In the war with the Gauls, the commanders of the Roman army were reproached with having omitted this wise precaution, and the loss of the battle of Allia was partly attributed to it.⁵ The success of arms being uncertain, the Romans wisely took care to secure themselves a retreat in case of the worst. The fortified camp put a stop to the enemy's victory, received the troops that retired in safety, enabled them to renew the battle with more success, and prevented their being entirely routed; whereas without the refuge of a camp, an army, though composed of good troops, was exposed to a final defeat, and to being inevitably cut to pieces.

The camp was of a square form, contrary to the custom of the Greeks, who made theirs round. The citizens and allies divided the work equally between them.⁶ If the enemy were near, part of the troops continued under arms, whilst the rest were employed in throwing up the intrenchments. They began by digging trenches of greater or less depth, according to the occasion. They were at least eight foot broad by six deep: but they were often twelve foot in breadth, and sometimes more, to fifteen or twenty. Of the earth dug out of the fossé, and thrown up on the side of the camp, they formed the parapet or breastwork, and to make it the firmer, they mingled it with turf cut in a certain size and form. Upon the brow of this parapet the palisades were planted. I shall repeat all that Polybius remarks upon these stakes, with which the intrenchment of the camp was strengthened, though I have already done it elsewhere, because this is the proper place for it. He speaks of them, upon

⁴ Liv. l. xxxvii.

⁵ Ibi Tribuni militum non loco castris ante capto, non præmunito vallo quò receptus esset—instruunt aciem. Liv. l. v. n. 37.

⁶ Trifariam Romani muniebant, alius exercitus prælio intentus stabat. Liv.

Cæsar—singula latera castrorum singulis attribuit legionibus munienda, fossamque ad eandem magnitudinem prædici jubat; reliquas legiones in armis expeditas contra hostem constituit. Cæs. de bell. civil. l. l.

¹ Dictator tulit ad populum, ut equum ascendere liceret. Liv. l. xxiii. n. 14. Plut. in Fab. p. 175.

² Laboris ultra fidem patiens erat, in agmine non nunquam equo, sæpius pedibus anteibat, capite detecto seu soli seu imber esset. Sueton. in Jul. Cæs.

³ Per hoc omne spatium cum legiones duceres—non vehiculum unquam, non equum respexisti. Plin. in Trajan.

the occasion of the order given by Q. Flaminius to his troops, to cut stakes against they should have occasion to use them.

This custom, says Polybius,⁷ which is easy to put in practice amongst the Romans, passes for impossible with the Greeks. They can hardly support their own weight upon their marches: whilst the Romans, notwithstanding the buckler, which hangs at their shoulders, and the javelins which they carry in their hands, load themselves also with stakes or palisades, which are very different from those of the Greeks. With the latter, those are best, which have many strong branches about the trunk. The Romans, on the contrary, leave only three or four at most upon it, and that only on one side. In this manner a man can carry two or three bound together, and much more use may be made of them. Those of the Greeks are more easily pulled up. If the stake be fixed by itself, when its branches are strong, and in great number, two or three soldiers will easily pull it away; and thereby an opening is made for the enemy, without reckoning that the neighbouring stakes will be loosened, because their branches are too short to be interwoven with each other. But this is not the case with the Romans. The branches of their palisades are so strongly inserted into each other, that it is hard to distinguish the stake they belong to. And it is as little practicable to thrust the hand through these branches to pull up the palisades; because being well fastened and twisted together, they leave no opening, and are carefully sharpened at their ends. Even though they could be taken hold of, it would not be easy to pull them out of the ground, and that for two reasons. The first is, because they are driven in so deep, that they cannot be moved; and the second, because their branches are interwoven with each other in such a manner, that one cannot be stirred without several more. Two or three men might unite their strength in vain to draw one of them out, which, however, if they effected, by drawing it a great while to and fro till it was loose, the opening it would leave, would be almost imperceptible. These stakes therefore have three advantages. They are every where to be had; they are easy to carry; and are a secure barrier to a camp, because very difficult to break through. In my opinion (says Polybius, in the conclusion he deduces from all he says) there is nothing practised by the Romans in war, more worthy of being imitated.

The form, dimension, and distribution of the different parts of the camp were always the same; so that the Romans knew immediately where their tents were to be pitched. The

Greeks differed from them in this. When they were to encamp, they always chose the place that was strongest by its situation, as well to spare themselves the trouble of running a trench round their camp, as because they were convinced, that the fortifications of nature were far more secure than those of art. From thence arose the necessity of giving their camps all sorts of forms, according to the nature of places, and to vary the different parts of them; which occasioned such a confusion, as made it difficult for the soldier to know exactly either his own quarters, or that of his corps.

The form and distribution of the Roman camp admits of great difficulties, and has occasioned great disputes amongst the learned. I shall repeat in this place what Polybius has said upon this head, and shall endeavour to explain him in some places, and to supply what he has omitted in others. He speaks of a consular army,⁸ which, in his time, consisted in the first place, of two Roman legions, each containing four thousand two hundred foot, and three hundred horse; and in the second, of the troops of the allies, a like number of infantry, and generally double the number of cavalry, which made in all, Romans and allies, eighteen thousand six hundred men. For the better conceiving the disposition of this camp, we should remember what has been said above upon the different parts into which the Roman legion was divided.

SECT. IV.

Disposition of the Roman camp according to Polybius.

After the place for the camp is marked out, says Polybius, which is always chosen for its convenience in respect to water and forage, a part of it is allotted for the general's tent, which I shall otherwise call the Prætorium, upon an higher ground than the rest, from whence he may see with the greater ease all that passes, and despatch the necessary orders. A flag was generally planted on the ground where this tent was to be pitched, round which a square space was marked out in such manner, that the four sides were an hundred feet distant from the flag, so that the ground occupied by the consul was about four acres. Near his tent were erected the altar, on which sacrifices were offered, and the tribunal for dispensing justice.

The consul commands two legions, of which each has six tribunes, which make twelve in all. Their tents are placed in a right line parallel to the front of the Prætorium, at the distance of fifty foot. In this space of fifty feet are the horses, beasts of burden, and the whole equi-

⁷ Polyb. l. xvi. pp. 754, 755.

⁸ Polyb. l. vi. pp. 473, 477.

page of the tribunes. Their tents are pitched in such a manner, that they have the Prætorium in the rear, and in the front all the rest of the camp. The tents of the tribunes at equal distances from each other take up the whole breadth of the ground, upon which the legions are encamped. Between the tents of the legions and tribunes, a space of an hundred feet in breadth parallel to those of the tribunes is left, which forms a street, called *Principia*, equal in length to the breadth of the camp, which divides the whole camp into the upper and lower parts. Beyond this street were placed the tents of the legions. The space which they occupy is divided in the midst into two equal parts, by a street of fifty feet broad, which extended the whole length of the camp. On each side on the same line were the quarters of the horse, the *Triarii*, the *Principes*, and *Hastarii*. Between the *Triarii* and the *Principes*, there is on both sides a street of the same breadth with that in the middle, which, as well as the latter, runs the whole length of this space. It is also cut by a cross street called the fifth, *Quintana*, because it opened beyond the fifth manipule.

As each of the four bodies, I have just named, was divided into ten parts; the cavalry into ten companies, *Turmas*, each of thirty men; the three bodies into ten maniples, of an hundred and twenty each, except those of the *Triarii*, which consisted of only half that number; the quarters of the horse, *Triarii*, *Principes*, and *Hastarii*, were severally divided, each into ten squares, along the space assigned the legions as above described. Each of these squares were an hundred feet every way, except those of the *Triarii*, which were only fifty feet broad, upon account of their smaller number, which we have already mentioned.

The tents, whether of the cavalry or infantry, are disposed in the same manner, with their fronts towards the streets. The cavalry of the two legions are first quartered facing each other, and separated by a space of fifty feet, which is the breadth of the street in the middle. This cavalry making only six hundred men, each square contained thirty horse on each side, which are the tenth part of three hundred. On the side of the cavalry, the *Triarii* are quartered, a manipule behind a troop of horse, both in the same form. They join as to the ground, but the *Triarii* turn their backs upon the horse, and here each manipule is only half as broad as long, because the *Triarii* are less in number than the other kind of troops.

At fifty feet distance and fronting the *Triarii*, a space which forms a street on each side in length, the *Principes* are placed along the side of the interval. Behind the *Principes* the *Hastarii* were quartered, joining as to the ground, but fronting the different way.

Thus far we have described the quarters of the two Roman legions, that formed the consul's army, and consisted of eight thousand four hundred foot, and six hundred horse. It remains for us to dispose of the allies. Their infantry were equal to that of the Romans, and their cavalry twice their number. In removing, for the extraordinaries or *Evocati*, the fifth part of the infantry, that is to say, sixteen hundred foot, and a third of the cavalry, or four hundred men, there remained in the whole seven thousand five hundred and twenty men, horse and foot, to quarter.

At fifty feet distance, and facing the Roman *Hastarii*, a space which formed a new street on each side, the cavalry of the allies encamp upon a breadth of an hundred and thirty-three feet, and something more. Behind that cavalry, and on the same line, encamp their infantry upon a breadth of two hundred feet. At the head of every manipule on each side are the tents of the centurions. The same, no doubt, should be said of the tents of the captains of the horse, though Polybius does not mention them. Part of the remaining space behind the tents of the tribunes, and on the two sides of the Prætorium or consul's tent, was employed for a market, and the rest for the quæstor, the treasury, and the ammunition.

Upon the right and left, on the sides and beyond the last tent of the tribunes, facing the Prætorium on a right line, were the quarters of the extraordinary cavalry, *Evocatorum*; and of the other volunteer horse, *Selectorum*.¹ All this cavalry faced on one side towards the place of the quæstor, and on the other towards the market. It did not only encamp near the consul's person, but often attended him upon marches; in a word, it was generally at hand to execute the orders of the consul and quæstor. The Roman infantry, extraordinary and volunteers, are in the rear of the horse last spoken of, and upon the same line, and do the same service for the consul and quæstor.

Above this horse and foot is a street an hundred feet broad, which runs the whole breadth of the camp. On the other side of this space are the quarters of the extraordinary horse of the allies facing the market, the Prætorium, and the treasury, or place of the quæstor. The extraordinary foot of the allies were encamped behind their horse, and faced the intrenchment and the extremity of the camp. The void spaces

¹ These two corps were horse, either chosen by the consuls themselves, or such as voluntarily attended them. This gave birth to the Prætorian cohorts or bands under the emperors. The *Selecti* or *Ablecti*, whether horse or foot, were drawn out of the allies. The *Evocati* were volunteers, old soldiers, either citizens or allies.

that remained on both sides were allotted to strangers and allies, who came after the rest.

All things thus disposed, we see the camp forms a square, and that as well by the distribution of the streets as the whole disposition, it very much resembles a city. And this was the soldiers' idea of it, who considered the camp as their country, and the tents as their houses. These tents were generally made of skins; from whence came the expression much used by authors, *sub pellibus habitare*. The soldiers joined together in messes, which they called *Contubernia*. These generally consisted of eight or ten men.

From the intrenchment to the tents is a space of two hundred feet; and that interval is of very great use, either for the entrance or departure of the legions. For each body of troops advances into that space by the street before it, so that the troops not marching in the same way, were not in danger of crowding and breaking each others' ranks. Besides which, the cattle, and whatever is taken from the enemy, is placed there, where a guard is kept during the night. Another considerable advantage of it is, that in attacks by night, neither fire nor dart can be thrown to them; or if that happens, it is very seldom, and can do no great execution; the soldiers being at so great a distance, and under the cover of their tents. If the camp of Syphax and Asdrubal in Africa had been enclosed within so great a space, Scipio had never been able to have burnt it in one night.

By the exact calculation of the camp, as Polybius describes it, each front contained 2016 feet, which make 672 yards; so that the whole superficies of the camp was 4,064,256 feet, or 225,792 square yards. When the number of the troops was greater, the measure and extent of the camp was augmented without changing its form. When the consul Livius Salinator received his colleague Nero into his camp, the extent of the camp was not enlarged;² the troops were only made to take up less ground, because those of Nero were not to stay long; which was what deceived Asdrubal. *Castræ nihil aucta errorem faciebant.*

Polybius does not tell us, where the lieutenants, *Legati*, who held the first rank after the consul, or the prætors and other officers, encamped. It is very likely, that they were not far from the consul, with whom they had a continual intercourse as well as the tribunes. Nor is he more express upon the gates of the camp, which were four according to Livy. *Ad quatuor portas exercitum instruxit, ut, signo dato, ex omnibus partibus eruptionem facerent.*³ He afterwards calls them, the *Extraordinary*, the

Right principal, the *Left principal*, and the *Quæstorian*. They have also other names, about which it is not a little difficult to reconcile authors. It is believed that the *Extraordinary* gate was called so, because near the place where the extraordinary troops encamped; and that it was the same as the *Prætorian*, which took its name from its nearness to the *Prætorium*. The gate opposite to this, at the other extremity of the camp, was called *porta Decumana*, because near the ten maniples of each legion; and very probably is the same with the *Quæstorian*, mentioned by Livy in the place above cited. I shall not expatiate any farther upon these gates, which would require long dissertations. But we cannot sufficiently admire the order, disposition, and symmetry of all the parts of the Roman camp, which resembles rather a city than a camp: the tent of the general placed on an eminence, in the midst of the altars and statues of the gods, which seemed to render the Divinity present amongst them, and surrounded on all sides with the principal officers, always ready to receive and execute his orders. Four great streets, which lead to the four gates, of the camp, with abundance of other streets on each side of them, all parallel to each other. An infinity of tents, placed in a line at equal distances, and with perfect symmetry. And this camp so vast and extensive, and so diversified in its parts, which seemed to have cost infinite time and pains, was often the work of an hour or two, as if it had rose of itself out of the earth. All this, however, is nothing in comparison with what, in a manner, constitutes the soul of the camp: I mean the wisdom of command, the attention and vigilance of the general, the perfect submission of the subaltern officers, the entire obedience of the soldiers to the orders of their chiefs, and the military discipline, observed with unexampled strictness and severity: qualities which ranked the Roman people above all nations, and at length made them their masters. The Roman manner of encamping must have been very excellent and perfect, as they observed it inviolably for so many ages, and with so great success, and there is almost no example of their camp's being forced by their enemies.

This custom of fortifying camps regularly, which the Romans considered as one of the most essential parts of military knowledge and discipline, has been disused by the moderns. The number of troops of which armies are now composed, and that occupies a considerable extent of ground, seems to render this work impracticable, which would become infinite. The people of Asia, whose armies were far more numerous than ours, never failed to enclose their camp, at least with very deep trenches, though they staid only a day or a night; and often

² Liv. l. xxvii. n. 66.

³ Liv. l. xl. c. 27.

fortified it with good palisades.¹ Xenophon observes, that it was the great number of their troops itself, that rendered this practice easy.

It is agreed, that no people ever carried the knowledge and practice of the art of war to an higher degree of perfection than the Romans: but it must be confessed, that their principal excellency lay in the art of encamping, and in drawing up armies in battle array. And this is what Polybius admires most in it, who was a good judge of military affairs, and had been long a witness of the excellent discipline observed amongst the Roman troops. When Philip, the father of Perseus, and before him Pyrrhus, prejudiced by their esteem for the Greeks, and full of contempt for all other nations, whom they treated as Barbarians, saw for the first time the distribution and order of the Roman camp, they cried out with surprise and admiration: *Sure that cannot be the disposition of Barbarians!*

But what ought to surprise us most, and what it is even difficult to conceive, so remote are our manners from it, is the character of this people inured to the rudest toils, and invincible to the severest fatigues. We see here the effects of a good education, and wholesome habits contracted from the most early youth. Most of these soldiers, though Roman citizens, had estates, and cultivated their inheritances with their own hands. In times of peace they exercised themselves in the most painful labours. Their hands, accustomed daily to wield the spade, turn up the land, and guide an heavy plough, only changed exercises, and even found rest in those imposed upon them by the military discipline; as the Spartans are said never to have been more at their ease than in the army and camp, so hard and austere was their manner of living at all other times. Who could believe, that there was nothing, even to cleanliness, of which particular care was not taken in the Roman camp. As the great street situated in the front of the Prætorium, was much frequented by the officers and soldiers, who passed through it to receive and carry orders, and upon their other occasions, and thereby exposed to much dirt; a number of soldiers were appointed to sweep and clean it every day in winter, and to water it in summer to prevent the dust.

SECT. V.

Employments and Exercises of the Roman Soldiers and Officers in their Camp.

The camp being prepared in the manner we have described, the tribunes assembled to take the

oath of all the men in the legions, as well free as slaves. All swear in their turn; and their oath consists in a promise not to steal any thing in the camp, and to bring whatever they should find in it to the tribunes. The soldiers had before taken a like oath, at the time they were listed: I deferred repeating it till now, that being joined with the other, its force might be the better conceived. By this first oath "the soldier engages to steal nothing alone or in concert with others, either in the army or within ten thousand paces of it; and to carry to the consul, or to restore to its lawful owner, whatever he may find exceeding the value of one sesterlius, that is to say, about five farthings, excepting certain things mentioned in the oath."² What is said here of ten thousand paces from the army, does not mean, that the soldiers were allowed to steal beyond that distance: but whatever they found without those bounds, they were not obliged to carry to the consul. Amongst things excepted, were the fruit of a tree, *poison*. Marcus Scaurus tells us,³ however, as a memorable example of the Roman abstinence, that a fruit-tree happening to grow within the enclosure of the camp, when the army quitted it the next day, nobody had touched it. Scaurus commanded the army at that time. This oath shows, how far the Romans carried their attention, and exactness in preventing all rapine and violence in the army, because theft is not only prohibited the soldiery, upon pain of the most indispensable severities but they are not even permitted to appropriate what they find on their way, and chance presents to them. Hence the laws actually treat as theft, the retaining any thing of another's after having found it, whether the owner were known or not. *Qui alienum jacens lucri faciendi causa sustulit, furti obstringitur, sive scit cujus sit, sive nescit.*⁴

I have said, that theft was prohibited with inexorable severity. There is a very terrible example of this under the emperors.⁵ A soldier had stole a fowl from a peasant, and had eat it with the nine other men in his mess. The emperor Pescennius Niger condemned them all to die, and only spared their lives at the earnest request of the whole army, obliging each of them to give the countryman ten fowls, and affixing a mark of public infamy upon them during the rest of the war. How many crimes is so wholesome a rigour capable of preventing! What a sight is a camp under such regulations! But what a vast difference is there between soldiers obedient to such a discipline in the midst of paganism, and our marauders, who call them-

² Aul. Gell. l. xvi. c. 4.

³ Frontin. Stratag. l. iv. c. 3.

⁴ Sabin. ex lib. Jur. Civil. ll.

⁵ Spartian. in Pescen.

¹ Xenoph. in Cyrop. l. ii. p. 80.

selves christians, and fear neither God nor man! The enclosure of the camp was a good barrier against disorders and license; and we shall soon see, that even upon marches, severity of discipline had no less effect than lines and intrenchments.

A wonderful order was observed night and day throughout the whole camp, in respect to the watchword, centinels and guards; and it was in this its security and quiet consisted. To render the guard more regular and less fatiguing, the night was divided into four parts or watches, and the day into four stations. Every one had his duty fixed, both in regard to time and place; and in the camp, all things were regulated and disposed, as in a well ordered family.

I have already spoken elsewhere of the simplicity of the ancients in regard to their provisions and equipage. The second Scipio Africanus would not suffer a soldier to have any more than a kettle, a spit, and a wooden bowl. Epaminondas,⁶ the glorious Theban general, had only this furniture both for the field and city. The ancient generals of Rome were not more magnificent. They did not know what silver plate was in the army; and had only a bowl and a saltseller of that metal for sacrifices.⁷ The horses glittered also with silver ornaments. The hours of dining and supping were made known by a certain signal. We have observed, that most of the Roman emperors ate in public, and often in the open air. It has been remarked, that Pescennius made no use of coverings against the rain.⁸ The meals of these emperors, as well as of the ancient generals, of whom Valerius Maximus speaks, were such as might be eaten in public without any reserve! the meats of which they consisted had nothing in them, that it was necessary to conceal from the eyes of the soldiers, who saw with joy and admiration, that their masters were no better fed than themselves.⁹

What was most admirable in the Roman discipline, was the continual exercise to which the troops were kept, either within or without the camp; so that they were never idle, and had

scarce any respite from duty.¹⁰ The new raised soldiers performed their exercise regularly twice a day, and the old ones once. They were formed to all evolutions, and other parts of the art military.¹¹ They were obliged to keep their arms always clean and bright.¹² They were made to take hasty marches of a considerable length, laden with their arms and several palisades; and that often in steep and craggy countries. They were habituated always to keep their ranks, even in the midst of disorder and confusion, and never to lose sight of their standards. They were made to charge each other in mock battles, of which the officers, generals, and even the consul himself were witnesses, and in which they thought it for their glory to share in person. When they had no enemy in the field, the troops were employed in considerable works, as well to keep them in exercise, as for the public utility. Such in particular are the highways, called for that reason *via militares*, which are the fruits of this wise and salutary custom. *Stratum militari labore iter.*¹³ We may judge whether, amidst these exercises, which were almost continual, the troops could find time for those unworthy diversions, equally pernicious in the loss of time and money. This itch, this frenzy for gaming, which to the shame of our times has forced the intrenchments of the camp, and abolished the laws of military discipline, had been regarded by the ancients as the most sinister of omens, and the most terrible of prodigies.

ARTICLE V.

Of Battles.

SECT. I.

The success of battles principally depends upon the generals or commanders in chief.

In this view, the value of military merit appears in all its force. To know whether a general were worthy of that name, the ancients examined his conduct in battle. They did not expect success from the number of troops, which is often a disadvantage, but from his prudence and valour, the cause and assurance of victory. They considered him as the soul of his army, who directs all its motions, to whose dictates every

6 Epaminondas, Dux Thebanorum tantæ abstinentiæ fuit, ut in supellectili ejus, præter ahenum et veru unicum, nihil inveniretur. *Frontin. Strateg.* l. iv. c. 3.

7 Præter equos viroque et si quid argenti, quod plurimum in phaleris æquorum, (nam ad vescendum facto per exiguo, utique militantes, utebantur) omnis cetera præda diripienda militi data est. *Liv.* l. xxii. n. 52.

8 Idem in omni expeditione, ante omnes militarem cibum sumpsit—nec sibi unquam, vel contra imbres, quæsit tecti suffragium. *Capitol.*

9 Fuit illa simplicitas antiquorum in cibo capiendi, humanitatis simul et continentiæ certissima index. Nam maximis viris prandere et cenare in propatulo, verecundiæ non erat. Nec sanè ulla epulas habebant, quas oculis populi subjicere erubescerent. *Val. Max.* l. ii. c. 5.

10 Opere faciendo milites se circumpiciendi non habebant facultatem. *Ibid.* in *bell. Afric.*

11 Ibi quia otiosa castra erant, crebro decurrere milites cogeant (Sempronius) ut tyrones assuescerent signa sequi, et in acie cognoscere ordines suos. *Liv.* l. xxiii. n. 33.

12 Primo die legiones in armis quatuor millium spatio decurrerunt. Secundo die arma curare et tergere ante tentoria jussit (Scipio Africanus). Tertio die sudibus inter se in modum justæ pugnæ concurrerent, præpiliatque missilibus jaculati sunt. *Liv.* l. xxvi. n. 51.

13 Acuerè alii gladios; alii galeas buculasque, scuta alii, loricasque tergere. *Liv.* l. xlii. n. 34.

13 Quint. l. ii. c. 14.

thing obeys, and upon whose conduct the event of the engagement generally depends. The affairs of the Carthaginians were absolutely desperate, when Xanthippus the Lacedæmonian arrived. Upon the account they gave him of what had passed in the battle, he attributed the ill success of it solely to the incapacity of their generals; and fully proved the truth of his opinion. He had brought with him neither infantry nor cavalry, but knew how to use both. Every thing had soon a new aspect, and demonstrated that one good head is of more value than a hundred thousand arms. The three defeats of the Romans by Hannibal taught them the effects of a bad choice. The war with Perseus had continued three years, through the ill conduct of three consuls, who had been charged with it: Paulus Emilius terminated it gloriously in less than one. It is on these occasions the difference between man and man is most evident.

The first care of a general, and that which demands great judgment and prudence, is to examine whether it be proper or not to come to an engagement: for both may be equally dangerous. Mardonius perished miserably with his army of three hundred thousand men, for not having followed the advice of Artabazus, which was to decline battle, and to use rather gold and silver against the Greeks than iron. It was contrary to the opinion of the wise Memnon, that Darius's generals fought the battle of the Granicus, which gave the first blow to the empire of the Persians. The blind temerity of Varro, notwithstanding his colleague's remonstrances, and the advice of Fabius, drew upon the republic the unfortunate battle of Cannæ; whereas a delay of a few weeks would probably have ruined Hannibal for ever. Perseus, on the contrary, let slip the occasion of fighting the Romans, in not having taken advantage of the ardour of his army, and attacked them instantly after the defeat of their horse, which had thrown their troops into disorder and consternation. Cæsar had been lost after the battle of Dyrrachium, if Pompey had known how to improve his advantage. Great enterprises have their decisive moments. The important point lies in wisely resolving what to choose, and in seizing the present occasion, that never returns when once neglected: and in this the whole depends upon the general's prudence.¹ There is a distribution of cares and duties in an army.² The head decrees; the arms execute. "Think only," says Otho to his "soldiers, of your arms, and of fighting with

bravery, and leave the care of taking good measures, and directing your valour aright, to me."

SECT. V.

Care to consult the gods and harangue the troops before a battle.

The moment before a battle, the ancients believed themselves called upon to consult the gods, that they might incline them in their favour. They consulted them by the flight or singing of birds, by the inspection of the entrails of victims, by the manner in which the sacred chickens pecked their corn, and by things of the like nature. They laboured to render them propitious by sacrifices, vows and prayers. Many of the generals, especially in the earlier times, discharged these duties with great solemnity and sentiments of religion, which they carried sometimes to a puerile and ridiculous superstition: others either despised them in their hearts, or openly made a jest of them; and people did not fail to ascribe the misfortunes, which their ignorance or temerity drew upon them, to that irreligious contempt. Never did prince express more reverence for the gods than Cyrus the Great. When he was marching to charge Cræsus, he sung the hymn of battle aloud, to which the whole army replied with great cries, invoking the god of war. Paulus Emilius, before he gave Perseus battle, sacrificed twenty oxen successively to Hercules, without finding any favourable sign in all these victims: it was not till the twenty-first that he believed he saw something which promised him the victory. There are also examples of a different kind. Epaminondas, no less brave, though not so superstitious as Paulus Emilius, finding himself opposed in giving battle at Leuctra upon account of bad omens, replied by a verse of Homer's, of which the sense is: "The only good omen is, to fight for one's country." A Roman consul, who was fully determined to fight the enemy as soon as he came up with them, kept himself close shut up within his litter, during his march, to prevent any bad omen from frustrating his design. Another did more: Seeing that the chickens would not eat, he threw them into the sea, saying, "If they won't eat, let them drink." Such examples of irreligion were uncommon, and the contrary opinion prevailed. There was without doubt superstition in many of these ceremonies: but the sacrifices, vows, and prayers, which always preceded battles, were proofs, that they expected success from the divinity, who alone disposed of it.

After having paid these duties to the gods, they applied themselves to men, and the general

1 Si in occasionis momento, cujus prætervolat opportunitas, cunctatus paulum fueris, nequiquam mox amissam quæras. *Liv.* l. xxv. n. 38.

2 Divisa inter exercitum, ducesque munia. Militibus cupido pugnandi convenit: duces providendo, consultando præsumt. *Tacit. Hist.* l. iii. c. 20.

3 Vobis arma et animus sit, mihi consilium et virtutis vestræ regimen relinquit. *Id.* l. i. c. 84.

exhorted his soldiers. It was an established custom with all nations to harangue their troops before battle; which custom was very reasonable, and might contribute very much to the victory. It is certainly right, when an army is upon the point of engaging with the enemy, to oppose the fear of a seemingly approaching death with the most powerful reasons, and such as, if not capable of totally extinguishing that fear so deeply implanted in our nature, may at least combat and overcome it: Such reasons, as the love of our country, the obligation to defend it at the price of our blood, the remembrance of past victories, the necessity of supporting the glory of our nation, the injustice of a violent and cruel enemy, the dangers to which the fathers, mothers, wives, and children, of the soldiers, are exposed:—these motives, and many of the like nature, represented from the mouth of a general, beloved and respected by his troops, may make a very strong impression upon their minds. Military eloquence consists less in words, than in a certain easy and engaging air of authority, that at once advises and commands; and still more in the inestimable advantage of being beloved by the troops, which might supply its place if wanted.⁴ It is not, as Cyrus observes,⁵ that such discourses can in an instant change the disposition of soldiers, and from timorous and abject, as they might be, make them immediately bold and intrepid: but they awaken, they rouse the courage nature has before given them, and add a new force and vivacity to it.

To judge rightly of the custom of haranguing the troops, as generally and constantly practised by the ancients, we must go back to the ages wherein they lived, and consider their manners and customs with particular attention.

The armies of the Greeks and Romans were composed of the same citizens, to whom, in the city and in time of peace, it was customary to communicate all the affairs of the state. The general did no more in the camp, or in the field of battle, than he would have been obliged to do in the *Rostrum* or tribunal of harangues. He did his troops honour, and attracted their confidence and affection, in imparting to them his designs, motives, and measures. By that means he interested the soldier in the success. The sight only of the generals, officers, and soldiers assembled, communicated a reciprocal courage and ardour to them all. Every one piqued himself at that time upon the goodness of his aspect and appearance, and obliged his neighbour to do the same. The

fear of some was abated or entirely banished by the valour of others. The disposition of particular persons became that of the whole body, and gave their aspect to affairs in general. There were occasions when it was most necessary to excite the good will and zeal of the soldier: for instance, when a difficult and hasty march was to be made, to extricate the army out of a dangerous situation, or to obtain one more commodious: when courage, patience, and constancy, were necessary for supporting famine and other violent distresses, conditions painful to nature: when some difficult, dangerous, but very important enterprise was to be undertaken: when it was necessary to console, encourage, and re-animate the troops after a defeat: when a hazardous retreat was to be made in view of the enemy, in a country he was master of: and lastly, when only a generous effort was wanting to terminate a war, or some important enterprise. Upon these and the like occasions the generals never failed to speak in public to the army, in order to sound their disposition by their acclamations, more or less strong, to inform them of their reasons for such and such conduct, and to conciliate them to it; to dispel the false reports which exaggerated difficulties, and discouraged them; to let them see the remedies preparing for the distresses they were under, and the success to be expected from them; to explain the precautions it was necessary to take, and the motives for taking them. It was the general's interest to flatter the soldier in making him the confidant of his designs, fears, and expedients, in order to engage him to share in them, and act in concert and from the same motives with himself. The general in the midst of soldiers, who, as well as himself, were all, not only members of the state, but had a share in the authority of the government, was considered as a father in the midst of his family.

It may not be easy to conceive how he could make himself heard by the troops, but that difficulty will vanish if we remember, that the armies of the Greeks and Romans were not very numerous—those of the former seldom exceeding ten or twelve thousand men, and of the latter, very rarely twice that number; I do not speak of the later times. The generals were heard, as the orators were in the public assemblies, or from the tribunal for harangues. Every individual did not hear: but the whole people were informed at Rome and Athens; the whole people deliberated and decided, and none of them complained of not having heard. It sufficed, that the most ancient, the most considerable, the principals of companies and quarters were present at the harangue, of which they afterwards gave an account to the rest. On the column of Trajan, the emperor is seen

⁴ *Caritatem paraverat loco auctoritatis. Tacit. in Agri- col. c. 16.*

⁵ Xenoph. in *Cyrop.* l. iii. p. 84.

haranguing the troops from a tribunal of turf raised higher than the soldiers' heads, with the principal officers around him upon the platform, and the multitude forming a circle at a distance. One would not believe in how little room a great number of unarmed men will stand upright, when they press close to each other; and these harangues were usually made in the camp to the soldiers quiet and unarmed. Besides which, they accustomed themselves from their youth to speak upon occasion with a strong and distinct voice. When the armies were more numerous, and upon the point of giving battle, they had a very simple and natural manner of haranguing the troops. The general on horseback rode through the ranks, and spoke something to the several bodies of troops in order to animate them. Alexander¹ did so at the battle of Issus, and Darius almost the same at that of Arbela,² though in a different manner. He harangued his troops from his chariot, directing his looks and gesture to the officers and soldiers that surrounded him. Without doubt, neither the one nor the other could be heard by any but those who were nearest them: but these soon transferred the substance of their discourses to the rest of the army.

Justin, who abridged Trogius Pompeius, an excellent historian that lived in the time of Augustus, repeats an entire harangue, which his author had put into the mouth of Mithridates.³ It is very long, which ought not to seem surprising, because Mithridates does not make it just before a battle, but only to animate his troops against the Romans, whom he had before overthrown in several battles, and intended to attack again. His army consisted of almost three hundred thousand men of twenty-two different nations, who had each their peculiar language, all which Mithridates could speak, and therefore had no occasion for interpreters to explain his discourse to them. Justin, where he repeats the speech in question, barely says, that Mithridates called an assembly of his soldiers: *Ad consociem milites vocat*. But what did he do to make twenty-two nations understand him? Did he repeat to each of them the whole discourse quoted by Justin? That is improbable. It were to be wished, that the historian had explained himself more clearly, and given us some light upon this head. Perhaps he contented himself with speaking to his

own nation, and making known his views and designs by interpreters. Hannibal acted in this manner.⁴ When he was going to give Scipio battle in Africa, he thought it incumbent on him to exhort his troops: and as every thing was different amongst them, language, customs, laws, arms, habits, and interests, so he made use of different motives to animate them. "To the auxiliary troops, he proposed an immediate reward, and an augmentation of their pay out of the booty that should be taken. He inflamed the peculiar and natural hatred of the Gauls against the Romans. As for the Ligurians, who inhabited a mountainous and barren country, he set before them the fertile valleys of Italy, as the fruit of their victory. He represented to the Moors and Numidians the cruel and violent government of Massinissa, to which they would be subjected, if overcome. In this manner he animated these different nations, by the different views of hope and fear. As to the Carthaginians, he omitted nothing that might excite their valour, and addressed himself to them in the warmest and most pathetic terms: the danger of their country, their household gods, the tombs of their ancestors, the terror and consternation of their fathers and mothers, their wives and children; in fine, the fate of Carthage, which the event of that battle would either ruin and reduce into perpetual slavery, or render mistress of the universe; every thing being extreme which she had either to hope or fear."⁵ This is a very fine discourse. But how did he make these different nations understand it? Livy informs us: he spoke to the Carthaginians himself, and ordered the commanders of each nation to repeat to them what he had said. In this manner, the general sometime assembled the officers of his army, and after having explained what he desired the troops might be told, he sent them back to their several brigades or companies, in order to report what they had heard, and animate them for the battle. Arrian observes⁶ this in particular of Alexander the Great before the famous battle of Arbela.

SECT. III.

Manner of Embattling Armies, and of Engaging.

The manner of drawing up armies in battle, was not always alike with the ancients, and could not be so, because it depends on circum-

¹ Alexander ante prima signa ibat. — Cumque agmen obequitaret, varia oratione, ut cujusque animis aptum erat, milites alloquebatur. *Q. Curt.* l. iii. c. 10.

² Darius sicut curru eminebat, dextra lævaque ad circumstantium agmina oculis manusque circumferens, &c. *Q. Curt.* l. iv. c. 14.

³ Justin. l. xxxviii. c. 4—7.

⁴ Liv. l. xxx. n. 33.

⁵ Carthaginiensibus moenia patriæ, dil penates, sepulcra majorum, liberi cum parentibus, conjugisque pavidae, aut exitium servitiumque, aut imperium orbis terrarum; nihil aut in metum aut in spem medium ostentatur.

⁶ Arrian, l. iii. p. 117.

stances that vary perpetually, and consequently require different dispositions. The infantry were generally posted in the centre, in one or more lines, and the horse upon the wings.

At the battle of Thymbræa, all the troops of Cæsus, as well horse as foot, were drawn up in one line thirty men deep, except the Egyptians, who amounted to a hundred and twenty thousand men.⁷ They were divided into twelve large bodies or square battalions, of ten thousand men each, a hundred in front, and as many in depth. Cæsus with all his endeavours could not make them change this order, to which they were accustomed: this rendered the greatest part of those troops useless, who were the best in the army, and did not a little contribute to the loss of the battle. The Persians generally fought fourscore deep. Cyrus, to whom it was of great importance to extend his front as far as possible, in order to prevent being surrounded by the enemy, reduced his files to twelve deep only. The reader knows the event of this battle. In the battle of Leuctra, the Lacedæmonians who had of their own troops and their allies, four and twenty thousand foot and sixteen hundred horse, were drawn up twelve deep; and the Thebans fifty, though not above six thousand foot, and four hundred horse.⁸ This seems contrary to rule. The design of Epaminondas was to fall directly with the whole weight of his heavy battalion upon the Lacedæmonian phalanx, well assured, that if he could break that, the rest of the army would be soon put to the rout: and the effect answered the design.

I have described elsewhere the Macedonian phalanx, so famous among the ancients. It was generally divided, according to Polybius, into ten battalions, each consisting of sixteen hundred men, a hundred in front, and sixteen deep.⁹ Sometimes the latter number were doubled, or reduced to eight, according to the exigency of the occasion.¹⁰ The same Polybius makes a squadron consist of eight hundred horse, generally drawn up a hundred in front and eight in depth: he speaks of the Persian cavalry.

As to the Romans, their custom of drawing up their infantry in three lines continued long, and with uniformity enough. Among other examples, that of the battle of Zama between Scipio and Hannibal may suffice to give us a just idea of the manner in which the Romans and Carthaginians embattled their troops. Scipio placed the *Hastati* (or pikes) in the front line, leaving spaces between the cohorts. In the second he posted the *Principes*, with their

cohorts not fronting the spaces of the first line, as was usual with the Romans, but behind the cohorts of the *Hastati*, leaving spaces directly opposite to those of the front line; and this because of the great number of elephants in the enemy's army, to which Scipio thought proper to leave free passage. The *Triarii* composed the third line, and were a kind of corps de reserve. The cavalry were distributed upon the two wings; that of Italy upon the left commanded by Lælius, and the Numidians upon the right under Massinissa. Into the spaces of the first line he threw the light armed troops, with orders to begin the battle; in such a manner, however, that in case they were repulsed, or not able to support the charge of the elephants, they should retire, those who ran best, behind the whole army through the direct intervals, and those who should find themselves surrounded, through such openings as might be on the right or left. As to the other army, more than fourscore elephants covered it in front. Behind them Hannibal posted the foreign mercenaries, to the number of about twelve thousand Ligurians, Gauls, Bælearians, and Moors: behind this first line, were the Africans and Carthaginians. These were the flower of his army, with which he intended to fall upon the enemy, when fatigued and weakened by the battle: and in the third line, which he removed to the distance of more than a hundred paces from the second (more than a stadium), were the troops he had brought with him from Italy, on whom he could not rely, because they had been forced from their country, and he did not know whether he ought to consider them as allies or enemies. On the left wing he placed the cavalry of the Numidian allies, and on the right, that of the Carthaginians. I could wish that Polybius or Livy had informed us what number of troops there were on each side, and what depth the generals had given them in drawing them up. In the battle of Cannæ, some years before this, there is no mention of the *Hastati*, *Principes*, *Triarii*, that generally composed the three lines of the Roman armies. Livy, without doubt, supposes it a custom known to all the world.

It was usual enough, especially with some nations, to raise great cries, and to strike their swords against their bucklers, as they advanced to charge an enemy. This noise, joined to that of the trumpets, was very proper to suppress in them, by a kind of stupefaction, all fear of danger, and to inspire them with a courage and boldness, that had no view but victory, and defied death. The troops sometimes marched softly and coolly to the charge: and sometimes when they approached the enemy, they sprung forward with impetuosity as fast as they could move. Great men have been divided in opinion

7 Xenoph. in Cyrop. l. vi. p. 159, &c.

8 Xenoph. Hist. l. vi. p. 506, &c.

9 Polyb. l. xvii. p. 764, 767.

10 Id. l. xii. p. 664.

upon these different methods of attack. On the day of the battle of Thermopylæ, Xerxes's spy found the Spartans preparing to engage only by combing their hair.¹ Never was danger, however, more great. This bravado suited only soldiers determined like them to conquer or die: besides, it was their usual custom.

The light armed troops generally began the action by a flight of darts, arrows, and stones, either against the elephants, if there were any, or against the horse or infantry, to put them into disorder; after which they retired through the spaces behind the first line, whence they continued their discharges over the soldiers' heads. The Romans began a battle by throwing their javelins against the enemy, after which they came to blows with them; and it was then their valour was shown, and great slaughter ensued.

When they had broke the enemy and put them to flight, the great danger was, as it still is, to pursue them with too much ardour, without regard to what passed in the rest of the army. We have seen that the loss of most battles proceeded from this fault, the more to be feared, as it seems the effect of valour and bravery. Lælius and Massinissa, in the battle of Zama, after having broke the enemy and put them to flight, did not abandon themselves to so imprudent an ardour; but returning immediately from the pursuit, rejoined the main body, and falling upon Hannibal's rear, put the greatest part of his phalanx to the sword. Lycurgus had decreed, that after having pursued the enemy enough to secure the victory, the pursuit should cease; and that for two reasons: the first, because as the war was made between Greeks and Greeks, humanity required that they should not act with the greatest extremity against neighbouring people, in some sort their countrymen, who professed themselves vanquished by their flight. And the second, because the enemy, relying upon this custom, would be inclined to preserve their lives by retreating, rather than persist obstinately in a battle, during which they knew they had no quarter to expect.

The attack of an army by the flanks and rear must be very advantageous, as in most battles it is generally attended with victory. Hence we see in all battles, that the principal care of the most able generals is to provide against this danger.

It is surprising, that the Romans had so few cavalry in their armies; three hundred horse to four or five thousand foot. It is true, they made an excellent use of those they had. Sometimes they dismounted and fought on foot, their horses being trained to stand still in the mean while.² Sometimes they carried light

armed soldiers behind them, who got off and remounted with wonderful agility.³ Sometimes the horse charged the enemy on the full gallop, who could not support so violent an attack.⁴ But, however, all this amounted to no great service; and we have seen Hannibal indebted for his superiority in his four first battles chiefly to his cavalry. The Romans had made war at first upon their neighbours, whose country was woody, full of vineyards and olive-trees, and situate near the Appennine mountains, where the horse had little room to act or draw up. The neighbouring people had the same reason for not keeping much cavalry; and hence it became customary on both sides to have few. The Roman legion was established upon the foot of three hundred horse, the allies furnishing twice that number; which custom in succeeding times had the force of a law.

The army of the Persians had no cavalry, when Cyrus first had the command of it. He soon perceived the want of it, and in a very short time raised a great body of horse, to which he was principally indebted for his conquests. The Romans were obliged to do the same, when they turned their arms against the East, and had to deal with nations, whose principal force consisted in cavalry. Hannibal had taught them what use they were to make of it.

I do not find any mention made of hospitals for the sick and wounded in the armies of the ancients. No doubt they took care of them. Homer speaks of several illustrious physicians in the army of the Greeks at the siege of Troy; and we know that they acted as surgeons. Cyrus the younger, in the army with which he marched to the aid of his uncle Cyaxares, did not omit to carry with him a considerable number of able physicians.⁵ Caesar tells us in more than one passage of his Commentaries, that after a battle, the wounded were carried into the nearest neighbouring city. There are many instances of generals going to visit the wounded in their tents: which is a proof, that in quarters, where seven or eight comrades, citizens of the same district of the same city, lay, the soldiers took care of one another, when wounded.

Livy often mentions the *Cartel*, or agreement between nations at war for the ransom of prisoners.⁶ After the battle of Cannæ, Hannibal, having made himself master of the small camp of the Romans, agreed to restore each Roman citizen for three hundred pieces of money called *quadrigati*, which were *denarii*: that is, for about seven pounds, or an hundred and fifty livres; the allies for two hundred; and the slaves for one. The Romans, when they took Eretria, a city of Eubœa, where the Mace-

1 Her. l. vii. c. 206.

2 Liv. l. lli. n. 62.

3 Liv. l. xxvi. n. 4.

4 Id. l. viii. n. 30.

5 Xenoph. Cyrop. l. i. p. 29.

6 Liv. l. xxii. n. 52.

donians had a garrison, fixed the price of their ransom at three hundred pieces of money also, that is, at seven pounds, or an hundred and fifty livres.* Hannibal, seeing the Romans were determined not to ransom their prisoners who had surrendered themselves to him, sold them to different nations.* The Achæans bought a considerable number of them. When the Romans had re-established the liberty of Greece, the Achæans, out of gratitude, sent home all these prisoners, and paid their masters a certain sum of money per head; the total of which, according to Polybius, amounted to a hundred talents, or an hundred thousand crowns: for in Achaia, there were twelve hundred of these prisoners.

I do not believe, that the use of writing in ciphers was known to the ancients. It is however very necessary, for conveying secret advices to officers, either remote from the army, or shut up in a city, or in other important occasions. Whilst Q. Cicero was besieged in his camp by the Gauls, Cæsar wrote him advice, that he was marching to his relief with several legions, and should soon arrive.⁹ The letter was written in Greek, that if it fell into the enemy's hands, they might not know that Cæsar advanced.¹⁰ That precaution does not seem sufficiently certain; nor are signals, of which I have treated elsewhere, much more so: besides which, the use of them was very difficult, and at the same time perplexing and full of obscurity.

I shall relate a common and very remarkable custom amongst the Romans. When they were drawn up in line of battle, and ready to take their shields, and gird their robes close to their bodies, they made their wills without writing, by only appointing their heir before three or four witnesses. This was termed *testamentum in procinctu facere*.¹¹

After the little I have said upon battles, not daring to engage myself farther in a subject so much out of my sphere, I proceed to the rewards and punishments which followed good or bad success in battle.

SECT. IV.

Punishments—Rewards—Trophies—Triumphs.

Solon had reason to say, that the two great springs of human actions, and what principally set mankind in motion, are hope and fear; and that a good government cannot subsist without rewards and punishments; because impunity

imboldens guilt; and virtue, when neglected and undistinguished, frequently becomes languid and declines. The truth of this maxim is more evident when applied to a military government, which, as it gives greater scope to license, requires also, that order and discipline should be annexed to it by ties of a stronger and more vigorous nature.

It is true, this rule may be abused and carried too far, particularly in regard to punishment. With the Carthaginians, the generals, who had been unfortunate in war, were generally punished with death; as if want of success were a crime, and the most excellent captain might not lose a battle without any fault on his side. They carried their rigour much farther. For they condemned him to death, who had taken bad measures, though successful.¹² Amongst the Gauls, when troops were to be raised, all the young men capable of bearing arms were obliged to be present at the assembly on a certain day.¹³ He who came last was condemned to die, and executed with the most cruel torments. What a horrid barbarity was this! The Greeks, though very severe in supporting military discipline, were more humane.¹⁴ At Athens, the refusal to bear arms, which is far more criminal than a delay of a few hours or moments, was only punished by a public interdiction and a kind of excommunication, which excluded the person from entering the assemblies of the people, and the temples of the gods. But to throw away his shield in order to fly, to quit his post, or be a deserter, were capital crimes, and punished with death. At Sparta it was an inviolable law never to fly, however superior the enemy's army might be in number, never to abandon a post, nor surrender their arms.¹⁵ Those who had failed in these points, were declared infamous for ever. They were not only excluded from all offices, employments, assemblies, and public shows; but it was scandalous to ally with them in marriage, and a thousand insults were offered them in public with impunity. On the contrary, great honours were paid to such as had behaved themselves valiantly in battle, or had died sword in hand in the defence of their country.

Greece abounded with statues of the great men, who had distinguished themselves in battles. Their tombs were adorned with magnifi-

¹² Apud Carthaginenses in cruce tolli imperatores dicuntur, si prospero eventu pravo consilio, rem gesserunt. Liv. l. xxxviii. n. 46.

¹³ Hoc, more Gallorum, est initium belli, quo, lege communi, omnes puelleres armati convenire coguntur; et, qui ex eis novissimus venit in conspectu multitudinis omnibus cruciatibus affectus necatur. Cæs. de Bell. Gall. l. v.

¹⁴ Æschin. in Ctesiph. p. 437.

¹⁵ Her. l. vii. c. 104.

⁷ Liv. l. xxxii. n. 17.

⁸ Id. l. xxxiv. n. 46.

⁹ Cæs. Bell. Gall. l. v.

¹⁰ Epistolam Græcis conscriptam literis mittit, ne, intercepta epistola, nostra at hostibus consilia cognoscerent.

¹¹ Plot. in Cornel. p. 217.

cent inscriptions, which perpetuated their names and memories. The custom of the Athenians in this point was of wonderful efficacy to animate the courage of their citizens, and inspire them with sentiments of honour and glory.¹ After a battle, the last duties were publicly rendered to those who had been slain. The bones of the dead were exposed for three days successively to the veneration of the people, who thronged to throw flowers upon them, and to burn incense and perfumes before them. After which, those bones were carried in pomp, in as many coffins as there were tribes in Athens, to the place particularly allotted for their interment. The whole people attended this religious ceremony. The procession had something very august and majestic in it, and rather resembled a glorious triumph, than a funeral solemnity. Some days after, which far exceeds what I have just said, one of the best qualified Athenians pronounced the funeral oration of those illustrious dead before the whole people. The great Pericles was charged with this commission after the first campaign of the Peloponnesian war. Thucydides has preserved his discourse, and there is another upon the same subject in Plato. The intent of this funeral oration was to extol the courage of those generous soldiers who had shed their blood for their country; to inculcate the imitation of their example to the citizens, and especially to console their families. These were exhorted to moderate their grief by reflecting on the glory their relations had acquired for ever. "You have never," says the orator to the fathers and mothers, "prayed to the gods, that your children should be exempt from the common law, which dooms all mankind to die; but only that they should prove persons of virtue and honour. Your vows are heard, and the glory with which you see them crowned, ought to dry your eyes, and change your laments into thanksgiving." The orators often, by a figure common enough with them, especially upon great occasions, put these lively exhortations into the mouths of the dead themselves, who seemed to quit their tombs to cheer and console their fathers and mothers. They did not confine themselves to bare discourse, and barren praises. The republic, as a tender and compassionate mother, took upon herself the charge of maintaining and subsisting the old men, widows, and orphans, who stood in need of her support. The latter were brought up suitably to their condition till they were of age to carry arms: and then publicly, in the theatre, and in the presence of the whole people, they were dressed in a complete suit of armour, which was given them, and declared soldiers of

the republic.² Was there any thing wanting to the funeral pomp I now speak of, and did it not seem in some measure to transform the poor soldiers and common burghers of Athens into heroes and conquerors? Have the honours rendered amongst us to the most illustrious generals, any thing more animated and affecting? It was by these means that courage, greatness of soul, ardour for glory, and that zeal and devotion for their country, which rendered the Greeks insensible to the greatest dangers and death itself, were perpetuated amongst them. For, as Thucydides observes upon occasion of these funeral honours, "Great men are formed, where merit is best rewarded."³

The Romans were neither less exact in punishing offences against military discipline, nor less attentive in rewarding merit. The punishment was proportioned to the crime, and did not always extend to death. Sometimes a word of contempt sufficed for the punishment of the troops: at others, the general punished them by refusing them their share in the spoils. Sometimes they were dismissed, and not permitted to serve against the enemy. It was common enough to make them work in the intrenchments of the camp in a single tunic and without a belt. Ignominy was often more affecting than death itself.⁴ Caesar's mutinous troops demanded with seditious complaints to be dismissed. Caesar said only one word to them, which was, *Quirites*, as much as to say, citizens, whereas he used to call them, *Fellow-soldiers* or *comrades*; and immediately discharged them.⁵ That word was like a stroke of thunder to them. They believed themselves degraded and entirely dishonoured; and never ceased importuning him in the most humble and pathetic terms, till he consented, as the greatest of favours, that they should continue to carry arms for him. This punishment, whereby the soldiers were broke, was called *exauctoratio*.

The Roman army, through the fault of the consul Minucius, who commanded it, was besieged in their camp by the Æqui, and very near being taken.⁶ Cincinnatus, appointed dictator for this expedition, marched to his aid, delivered him, and made himself master of the enemy's camp, which abounded with riches. He punished the consul's troops by giving them no share of the booty, and obliged Minucius to quit the consulship, and to serve in the army as his lieutenant, which he did without com-

² Æschin. contra Ctesiph. p. 452, 453.

³ Ἡ Ἀθῆνα γὰρ οἷς κέρταται ἀφ' ἑνὸς μαρτυρεῖται, τοὺς δὲ καὶ ἀνδρεῖς ἀφ' ἑνὸς πολιτισμοῦ.

⁴ Dion. Cass. l. xlii. p. 210.

⁵ Divus Julius seditionem exercitus verbo uno compescuit, *Quirites*, vocando qui sacramentum ejus detrectabant. Tacit. Annal. l. i. c. 41.

⁶ Liv. l. lvi. n. 29.

¹ Thucyd. l. ii. p. 121.

plaint or murmur: "In those times," observes the historian, "people submitted with so much complacency to the persons in whom they saw a superiority of merit joined with authority, that this army, more sensible of the benefit, than ignominy they had received, decreed the dictator a crown of gold of a pound weight, and on his departure saluted him their patron and preserver."⁷

After the battle of Cannæ, wherein more than forty thousand Romans were left upon the spot, about seven thousand soldiers, who were in the two camps, seeing themselves without resource or hope, surrendered themselves and their arms to the enemy, and were made prisoners.⁸ Ten thousand, who had fled as well as Varro, escaped by different ways, and at length rejoined each other at Canusium under the consul. Whatever endeavours these prisoners, and their relations could make afterwards to obtain their ransom, and how great soever the want of soldiers then was at Rome, the senate could never resolve to redeem soldiers, who had been so base as to surrender themselves to the enemy, and whom more than forty thousand men killed before their eyes, could not inspire with the courage to die in the field for their country. The other ten thousand, who had escaped by flight, were banished into Sicily, and their return prohibited so long as the war with the Carthaginians should continue.⁹ They demanded with earnest entreaties to be led on against the enemy, and that they might have an opportunity to expiate with their blood the ignominy of their flight. The senate remained inflexible, not believing that they could confide the defence of the republic to soldiers, who had abandoned their companions in battle. At length, upon the remonstrances and warm solicitations of the proconsul Marcellus, their demand was granted; but upon condition, that they should not set foot in Italy so long as the enemy should remain in it. All the knights of the army of Cannæ, banished into Sicily, were also severely punished.¹⁰ In the first review made by the censors after that battle, all the horses with which the republic furnished them, were taken away; which implied their being degraded from the rank of Roman knights: their former years of service were declared void, and they were obliged to serve ten more, supplying themselves with horses; that is to say, as many years as if they had never served at all; for the usual service of the knights was ten campaigns.

The senate, rather than ransom the prisoners, which would have cost less, chose rather to arm eight thousand slaves; to whom they promised liberty, if they behaved themselves valiantly.¹¹ They had served almost two years with great bravery: their liberty, however, was not yet arrived, and with whatever ardour they desired it, they chose rather to deserve than demand it.¹² An important occasion arose, in which it was pointed out to them as the reward of their valour. They did wonders in the battle, except four thousand of them, who discovered some timidity. After the battle, they were all declared free. Their joy was incredible. Gracchus, under whose command they were, told them: "Before I make you all equal by the title of liberty, I would not willingly have made a difference between the valiant and the timorous. It is however but just that I should do so." He then made all those, who had not done their duty as well as the rest, promise upon oath, that, as long as they served, as a punishment for their fault, they should always stand at their meals, except when hindered by sickness: which was accepted and executed with entire submission. This of all the military punishments was the lightest and most gentle.

The punishments I have hitherto related scarce affected any thing besides the soldier's honour: there were others which extended to his life. One of the latter was called *Fustuarium*, the bastinado.¹³ It was executed thus. The tribune taking a stick, only touched the criminal with it, and immediately after, all the soldiers of the legion fell on him with sticks and stones, so that he generally lost his life in this punishment.¹⁴ If any one escaped, he was not thereby entirely discharged. His return into his own country was entirely prohibited, and not one of his relations dared open his door to him. They punished a sentinel in this manner, who had quitted his post; whence may be judged the exact discipline they observed in respect to the guard by night, on which the safety and preservation of the whole army depended: all those who abandoned their posts, whether officers or soldiers, were treated in the same manner. Velleius Paterculus cites an example of this punishment, executed upon one of the principal officers of a legion, for having shamefully taken to flight in battle: this was in the time of Anthony and young Octavius.¹⁵ But what ap-

11 Liv. l. xxii. n. 5. l. xxiv. n. 14—16.

12 Jam alterum annum libertatem tacite mereri, quam postulare palam maluerunt. Liv.

13 Si Antonius consul, fustuarium meruerunt legiones, que consulem reliquerunt. Cic. Philipp. l. iii. n. 14.

14 Polyb. l. vi. p. 481.

15 Calvinus Domitius cum ex consulatu obtineret Hispaniam, gravissimi comparandique antiquis exempli anti-

7 Adeo tam imperio meliori animas mansuetè obediens erat, ut beneficii magis quam ignominie hic exercitus memor et coronam auream dictatori libræ pondo decreverit, et proficiscentem eum patronum salutaverit. Liv.

8 Liv. l. xxii. n. 50—60.

9 Liv. l. xxiii. n. 25.

10 Id. l. xxvii. n. 11.

pears more astonishing, those were condemned to the same punishment, who stole in the camp. The reader may remember the oath taken by the soldiers upon their entering it.

When a whole legion or cohort were guilty, as it was not possible to put all that were criminal to death, they were decimated by lot, and he whose name was drawn the tenth, was executed. In this manner, fear seized all, though few were punished. Others were sentenced to receive barley instead of wheat, and to encamp without the intrenchments at the hazard of being attacked by the enemy. Livy has an example of a decimation as early as the infancy of the republic.¹ Crassus, when he put himself at the head of the legions, who had suffered themselves to be defeated by Spartacus, revived the ancient custom of the Romans, which had been disused for several ages, of decimating the soldiers when they had failed in their duty; and that punishment had a very happy effect. This kind of death, says Plutarch, is attended with great ignominy; and as it was executed before the whole army, it diffused terror and horror throughout the camp. Decimation became very common under the emperors, especially in regard to the Christians, whose refusal to adore idols, or persecute believers, was considered and punished as a sacrilegious revolt. The Theban legion was treated in this manner under Maximian. That emperor caused it to be decimated three times successively, without being able to overcome the pious resistance of those generous soldiers.² Mauritius, their commander, in concert with all the other officers, wrote a very short, but admirable letter to the emperor. "We are your soldiers, emperor, but the servants of God. We owe you our service, but him our innocence. We cannot renounce God, to obey you; that God, who is our Creator and Master, and yours also, whether you will or no."³ All the rest of the legion were put to death without making the least resistance, and went to join the legions of angels, and to praise the God of armies with them for evermore.

These capital punishments were not frequent in the time of the republic. It was a capital crime, as we have said, to quit a post or fight without orders: and the example of fathers, who had not spared their own sons, inspired a

just terror, which prevented faults, and occasioned the rules of military discipline to be respected.⁴ There is in these bloody executions a severity shocking to nature, and which however we could not venture absolutely to condemn: because if every great public example has something of injustice in it, on the other hand, whatever of that kind is contrary to the interest of particulars, is compensated by the utility which redounds to the public from it.⁵ A general is sometimes obliged to treat his soldiers with great rigour, to put a stop by timely severities either to a revolt just forming, or to an open violation of discipline. He would at such times be cruel if he acted with gentleness, and would resemble the surgeon, who out of a false compassion should choose rather to let the whole body perish, than cut of a mortified member. What is to be avoided on these occasions, is to seem to act from passion or hatred: for then the remedies improperly applied would only aggravate the disease.⁶ This happened in the first example of decimation I cited, by which Appius had made himself so extremely odious to the soldiers, that they chose rather to suffer themselves to be beaten by the enemy, than to conquer with him and for him.⁷ He was of an obstinate disposition, and inflexibly rigid.⁸ Papirius, long after, acted much more wisely in a case not unlike this. His soldiers, expressly to mortify him, retreated in battle, and deprived him of a victory.⁹ He perceived like an able captain the cause of that behaviour, and found it necessary to moderate his severity, and soften his too imperious humour. He did so, and succeeded so well, that he entirely regained the affection of his troops. A complete victory was the consequence. Much art and prudence are requisite in punishing with success.

It was rather by the views of reward and sense of honour that the Romans engaged their troops to do their duty. After the taking of a town, or gaining a battle, the general usually gave the booty to the soldiers, but with admirable order, as Polybius informs us in his relation of the taking of Carthage. It is, says he, an established custom among the Romans, upon the signal given by the generals, to disperse themselves in order to plunder the city

quis auctor fuit. Quippe principili centurionem, nomine Vibitium, ob turpem ex acie fugam, fuste percussit. *Paterc.* l. ii. c. 78.

1 *Liv.* l. ii. n. 59. *Plut.* in *Crass.* p. 548.

2 *Ex* *epist.* 8. *Eusebii* *Lugd.* ad *Sylv.* *Episc.*

3 *Miles* *sumus, imperator, tui sed tamen servi Dei. Tibi militiam debemus, illi innocentiam. Se qui imperatorem in hoc nequam posuimus, ut actorem negemus; Deum auctorem nostrum. Deum auctorem, velis nobis, trum.*

4 *Presidio* *decedere* *apud* *Romanos* *capital* *esse, et* *nece* *liberorum* *etiam* *eorum* *eam* *legem* *parentes* *sanzisse.* *Liv.* l. xxiv. n. 37.

5 *Habet* *aliquid* *ex* *iniquo* *omne* *magnum* *exemplum, quod* *contra* *singulos, utilitate* *publica* *reprehenditur.* *Tacit.* *Annal.* l. xiv. c. 44.

6 *Interpestivis* *remediis* *delicta* *accendebatur.* *Tacit.*

7 *Liv.* l. viii. n. 36. 8 *Ibid.*

9 *Cessatum* *à* *militæ, ac* *de* *industria, ut* *obtrectaretur* *de* *laudibus* *ducis, impedita* *victoria* *est.* *Sensit* *periculum* *dux* *que* *res* *victoriæ* *obstaret: temperandum* *ingenium* *suum* *esse, et* *severitatem* *miscendam* *comitate.* *Liv.*

that has been taken: after which every one carries the booty he has got to his own legion. When the whole has been sold by auction, the tribunes divide the money into equal shares, which are given not only to those who are in other posts, but to those who have been left to guard the camp, the sick, and such as have been detached upon any occasion. And to prevent any injustice from being committed in this part of the war, the soldiers are made to swear before they take the field, and the first day they assemble, that they will not secrete any part of the booty, but faithfully bring in whatever they shall make. What a love of order, observance of discipline, and regard for justice does this argue, amidst the tumult of arms, and the very ardour of victory! Upon the day of triumph, the general made another distribution of money in greater or less proportions, according to the different times of the republic; but always moderate enough before the civil wars.

Honour was sometimes annexed to advantage, and the soldier was much more sensible to the one than the other: and how much more the officers!¹⁰ P. Decius, the tribune, with a detachment which he conducted at the hazard of his life upon the brink of an eminence, had saved the whole army by one of the noblest actions mentioned in history. Upon his return, the consul, in the presence of all the troops, bestowed the highest praises upon him, and besides many other military presents, gave him a crown of gold, and an hundred oxen, to which he added another ox of extraordinary size and beauty with gilt horns. He decreed the soldiers, who had accompanied the tribune, a double portion of corn during the whole time they should serve: and for the present, two oxen and two complete dresses a man. The legions also, to express their gratitude, presented Decius with a crown of turf, which was the sign of a siege raised; and his own soldiers did the same. He sacrificed the ox with the gilt horns to Mars, and gave the other hundred to his soldiers: the legions also rewarded each of them with a pound of flour, and a gallon of wine.

Calpurnius Piso, surnamed *Frugi*, out of veneration for his virtues and great frugality, having variously rewarded most of those, who had assisted him in terminating the Sicilian war, thought himself obliged to reward also, but at his own expense, the services of one of his sons, who had signalized himself the most upon that occasion.¹¹ He declared publicly, that he had deserved a crown of gold, and assured him, that he would leave him one by his will, of the weight of three pounds: decreeing him that honour as general, and paying the price of

the crown as father: *Ut honorem publicæ a duce, pretium patriæ a patre acciperet.*

The crown of gold was a present scarce ever granted but to principal officers. There were several others for different occasions. The crown *Obsidionalis*, of which I have spoken before, for having delivered the citizens or troops from a siege, was composed of turf, and was the most glorious of all. The *Corona Civica*, for having saved the life of a citizen, was of oaken leaves, in remembrance, as is said, that men of old fed upon acorns. The *Mural* crown, *Pinnis*, for having been the first in scaling the walls of a place besieged, was adorned with a kind of battlements, like those to be seen upon the ancient walls of towns. The *Corona Navalis*, *Rostra*, which was composed of ornaments like beaks of ships, was given to the admiral of a fleet, who had gained a victory. Instances of this honour are very rare. Agrippa, who obtained one, thought it very much for his honour:—

—Cui belli insignis superium,
Tempora navali fulgent rostrata coronâ.

Virg. Æn. l. viii.

—Who bears war's glorious sign,
Beak'd with the naval crown whose temples shine.

Besides these crowns (for there were some others) the generals presented the soldiers or officers, who signalized themselves in a particular manner, with a sword, a shield, and other arms; and sometimes also with distinguishing military habits. We have seen an officer rewarded thirty-four times by the generals, and gain six civic crowns.¹² These presents and crowns were titles of nobility to them, and upon competitions with rivals for ranks and dignities, often determined the preference in their favour; and they did not fail to adorn themselves with them upon public solemnities. They also affixed to the doors of their houses the spoils they had taken from the enemy; nor was any future possessor permitted to take them down.¹³ Upon this Pliny makes a fine reflection, which it is impossible to render in terms of equal spirit with his. "The houses," says he, "still triumphed, though they had changed their masters. What could more excite to glory, or be more offensive to an unworthy possessor, than walls, which reproached him as often as he entered, that they were honoured solely by the trophies of another."¹⁴

¹² Quater et tricies virtutis causa donatus ab imperatoribus sum: sex civicas coronas accepi. *Liv. l. xlii. n. 34.*

¹³ *Liv. l. x. n. 7. l. xxiii. l. xxxviii. n. 43.*

¹⁴ Triumphabant etiam domini mutatis, domus ipse. Ex erat hæc stimulo ingens, exprobrantibus tectis quotidie imbellem dominum intrare in alienum triumphum. *Plin. l. xxxv. c. li.*

The praises given in the presence of the whole army made no less impression upon their minds ; and are what a good general never spares on proper occasions. Agricola, says Tacitus, neither envied nor lessened any man's glory : Centurion or Prefect, in him they found a faithful witness of their exploits, to which he never failed doing the utmost justice.¹ Caesar² upon being informed of the valour with which Q. Cicero, the famous orator's brother, had defended his camp against the great army of the Gauls, extolled publicly the greatness of the action, praised the legion in general, and apostrophized particularly to those of the centurions and tribunes, who, as Cicero has observed to him, distinguished themselves most.³ Upon another occasion, Scæva, a centurion, had contributed very much to the defence of a breach of great importance. When his buckler was brought to Caesar with two hundred and thirty arrow shots through it ; surprised and charmed with his bravery, he immediately made him a present of two hundred thousand sesterces (about twelve hundred pounds), and raised him directly from the eighth to the first rank of the centurions, appointing him Primpilus, a very honourable post, as I have observed elsewhere, and which had no superior but the tribunes, lieutenant generals, and commanders in chief. Nothing was equal to this latter method of rewarding, for inspiring the troops with valour. By a wise establishment, there were many degrees of honour and distinction in a legion, of which none were granted upon account of birth, or bought for money. Merit was the only means of attaining them, at least it was the most ordinary method. Whatever distance there was between the private sentinel and the consular dignity, the door lay open to it : it was a beaten path, and there were many examples of citizens, who from one degree to another, at length attained that supreme dignity. With what ardour must such a sight inspire the troops ! Men are capable of every thing, when properly excited by the motives of honour and glory.

It remains for me to say something upon trophies and triumphs.

Trophies amongst the ancients, were originally a heap of arms and spoils taken from enemies, and erected by the victor in the field of battle, of which in aftertimes representations were made in stone and brass. They never failed, immediately after a victory, to raise a trophy, which was looked upon as a sacred thing, because always an offering to some divi-

nity : for which reason none presumed to throw it down. Neither when it fell through age, was it permitted to be erected again ; for which Plutarch gives a fine reason, that argues great humanity in the sentiments of the ancients. " To re-instate," says he, " and set up again the monuments of ancient differences with enemies, which time has conveniently demolished, has something odious in it, and seems to argue a desire to perpetuate enmity."⁴ We do not observe the same humanity in the Roman triumphs, of which I am still to speak. The generals, as well as the officers and soldiers, had also rewards in view. The title of *Imperator* granted after a victory, and the supplications, that is to say, the public processions, sacrifices, and prayers, decreed at Rome for a certain number of days, to thank the gods for the success of their arms, agreeably flattered their ambition. But the triumph exceeded every thing. There were two sorts of it, the lesser and the greater. The lesser triumph was called *Oratio*. In that the general was neither seated on a chariot, dressed in triumphal robes, nor crowned with laurel. He entered the city on foot, or, according to some, on horseback, crowned with myrtle, and followed by his army. This kind of triumph was granted only, either when the war had not been declared, had been with a people little considerable, or not attended with any great defeat of the enemy. A triumph could properly be granted only to a dictator, a consul, or a prætor, who had commanded in chief. The senate decreed this honour, after which the affair was deliberated upon in the assembly of the people, where it often met with great difficulties. Several, however, triumphed without the senate's concurrence ; provided the people had decreed them that honour. But if they could not obtain it from either the one or the other order, they went and triumphed upon the Alban mountain in the neighbourhood of the city. It is said, that to obtain this honour, it was necessary to have killed five thousand enemies in battle.⁵

After the general had distributed part of the spoils to the soldiers, and performed some other ceremonies, the procession began, and entered the city through the triumphal port to ascend to the capitol. At the head of it were the players upon musical instruments, who made the air resound with their harmony. They were followed by the beasts that were to be sacrificed, adorned with fillets and flowers, many of them having their horns gilt. After them came the whole booty, and all the spoils, either displayed upon carriages, or borne upon the shoulders of young men in magnificent

¹ Nec unquam per alios gesta avidus intercept : seu centurio, seu præfectus, incorruptum facit testem habebat. Tacit. in Vit. Agric. c. xxii.

² Cass. de Bell. Gall.

³ De Bell. Civ. l. iii.

⁴ Plut. in Quæst. Rom. p. 372.

⁵ Val. Max. l. ii. c. 8.

habits. The names of the nations conquered were written in great characters, and the cities, that had been taken, represented. Sometimes they added to the pomp extraordinary animals, brought from the countries subjected, as bears, panthers, lions, and elephants. But what most attracted the attention and curiosity of the spectators, were the illustrious captives, who walked in chains before the victor's chariot; great officers of state, generals of armies, princes, and kings, with their wives and children. The consul followed (supposing the general to be so) mounted upon a superb chariot, drawn by four horses, and robed with the august and magnificent habit of triumph, his head encircled with a crown of laurel, holding also a branch of the same tree in his hand; and sometimes accompanied by his young children sitting near him. Behind the chariot marched the whole army; the cavalry first, then the infantry. All the soldiers were crowned with laurel, and those who had received particular crowns, and other marks of honour, did not fail to show them on so great a solemnity. They emulated each other in celebrating the praises of their general, and sometimes threw in expressions, sufficiently offensive, of railery and satire against him, which savoured of the military freedom; but the joy of the ceremony entirely blunted their edge, and abated their bitterness. As soon as the consul turned from the forum towards the capitol, the prisoners were carried to prison; where they were either immediately put to death, or kept in confinement often for the rest of their lives. Upon his entrance into the capitol, the victor made this very remarkable prayer to the gods. "Filled with gratitude and joy, I return you thanks, O most good and most great Jupiter, and you queen Juno, and all the other gods, the guardians and inhabitants of this citadel, that to this day and hour you have vouchsafed by my hands to preserve and guide the Roman republic happily. Continue always, I implore you, to preserve, guide, protect, and favour it in all things." * This prayer was followed by sacrificing the victims, and a magnificent feast, given in the capitol, sometimes by the public, and sometimes by the person himself who triumphed. The reader may see in Plutarch the long and fine description he gives of the triumph of Paulus Emilius.

It must be allowed that this was a glorious day for a general of an army; and it is not

surprising that all possible endeavours should be used to deserve so grateful a distinction, and so splendid an honour. Nor had Rome any thing more magnificent and majestic than this pompous ceremony. But the sight of captives, the mournful objects of compassion, if those victors had been capable of any, obscured and effaced all its lustre. What inhuman pleasure—what barbarous joy—to see princes, kings, princesses, queens, tender infants, and feeble old men, dragged before them! We may remember the dissembled marks of friendship, the false promises, the treacherous caresses of young Cesar, called afterwards Augustus, in regard to Cleopatra, solely with the view of inducing that princess to suffer herself to be carried to Rome, to adorn his triumph, and gratify him in the cruel satisfaction of seeing the most potent queen of the world prostrate at his feet in the most depressed and forlorn condition possible to imagine. But she well knew the snare. Such conduct and such sentiments, in my opinion, dishonour human nature.

In relating the rewards granted by the Romans to the soldiery, I have omitted a very important circumstance—the establishment of colonies. When the Romans first carried their arms, and extended their conquests out of Italy, they punished the people, who resisted them with too much obstinacy, by depriving them of part of their lands, which they granted to such of the Roman citizens as were poor, and especially to the veteran soldiers, who had served their full proportion of time in the army. By this means the latter saw themselves settled in tranquillity with a comfortable income, sufficient for the support of their families. They became by degrees the most considerable persons in the cities to which they were sent, and obtained the first posts, and principal dignities in them. Rome by these settlements, which were the result of a wise and profound policy, besides rewarding her soldiers advantageously, kept the conquered nations in subjection by their means, formed them to the Roman manners and customs, and by degrees made them forget their own customs and habits, to embrace those of their victors. France has established a new kind of military reward, which merits a place here.

SECT. V.

Establishment of the Royal Hospital of Invalids at Paris.

We do not find either among the Greeks or Romans, or any other people, any public foundations for the relief of the soldiery, whom long fatigues or wounds have made incapable of ser-

6 Gratias tibi, Jupiter optime, maxime; tibi que Junoni reginæ, et cæteris hujus custodibus habitatoribusque arcis diis Iubens lætusque ago, re Romana in hanc diem et horam, per manus quod voluisti, servata, bene gesta que. Eandem et servate, ut facitis, fovete, protegitte, propitiati, supplex oro. *Æt. Rosini Antiq. Rom.*

vice. It was reserved for Louis XIV. to set other princes that example, which England soon began to imitate; and we may say, that amongst an infinite number of great actions which have rendered his reign illustrious, nothing equals the glorious foundation of the *Hôtel royal des invalides*.

There has been lately published a book upon the royal hospital of invalids, which answers in some measure the magnificence of that foundation, in the beauty and number of its plates and ornaments. In this book, all that regards the revenues, expenses, buildings, discipline, and government temporal and spiritual of that house, are circumstantially explained. We are obliged to persons who take pains to preserve and transmit in this manner to posterity an exact knowledge of facts so worthy of remembrance. For my part, my intent is only to give a brief idea of them.

Every thing in this structure denotes the grandeur and magnificence of its august founder. We are struck with astonishment at the sight of a vast and superb edifice, capable of containing almost four thousand persons, in which art has known how to unite whatever could strike the eye on the outside by pomp and splendour, with all that can conduce to the uses and conveniences of life within. There, in tranquillity and repose, the officers and soldiers, whom their wounds or age have made unable to serve, and the narrowness of their fortunes incapable to support themselves; there, those brave warriors, freed from all care and disquiet, are lodged, fed, clothed, and maintained, as well in sickness as health, in a decent manner, and find a safe retreat, and an honourable asylum provided for them, by the piety and paternal goodness of Louis XIV.

It is natural to conceive, that the expense for the support of such a house must be immense. Two thousand five hundred quarters of wheat, and about eleven thousand five hundred hog-heads of wine are annually consumed in it. Physicians, surgeons, apothecaries, and servants, abound in this house. The infirmaries are served by thirty-five sisters, *Filles de la charité*, with surprising industry and cleanliness. But whence arise the funds necessary for such a multitude of wants and occasions? Who could believe it, or can sufficiently admire the wisdom, that instituted such order and economy? It is the officer and soldier, who contribute with joy, and almost insensibly, to an establishment, in which they hope one day to find tranquillity and repose, and a period of all their labours. The fund for all these expenses arise from three deniers (a twelfth part of a French penny) deducted from every livre of the ordinary and extraordinary expenses of war. This seems a

small matter in itself, but the total amounts to a very considerable sum. During the war which ended 1714, in which an hundred millions of livres were yearly expended, these three deniers per livre, produced twelve hundred and fifty thousand livres a year.¹

I have said nothing yet of what is most admirable in this foundation, is in a manner its soul, and does most honour to the memory of Louis XIV. I do not mean that magnificent temple, wherein the most famous masters in architecture, painting, and sculpture, the Mansards, Decottes, Coyppelles, Girardons, Coustons, have exhausted their whole art to adorn that august pile. I mean the charitable care and Christian attention of that prince, after having provided, with a magnificence truly royal, for the temporal wants of the officers and soldiers, in providing also in this retreat for their spiritual necessities. It happens sometimes, that these warriors take upon them the profession of arms solely from the views of interest and ambition: that though most accomplished in military knowledge, they are utterly ignorant of religion: and that full of zeal and fidelity for their prince, they never give themselves any trouble about knowing their duty to God. How great an advantage and consolation is it to them to find, towards the close of their days, in the zeal and charity of wise and religious ministers of Jesus Christ, those instructions, which perhaps they have wanted in the former part of their lives; to recall in the bitterness of their hearts, whole years entirely past in vice and libertinism; and to retrieve by sincere repentance and sorrow the reward of all their actions, even of the most laudable, which were otherwise unfortunately lost to them from the badness of their motives. The pomp and magnificence of this temple are justly admired. But another object presents itself to our view at whatever hour of the day we enter it, a sight far more worthy of admiration, and which cannot be looked upon without tears in our eyes: ancient warriors maimed, crippled, without legs, arms, eyes, humbly prostrating themselves before the God of armies, whose majesty they adore with the most profound resignation; to whom they pay continual thanksgivings for having delivered them out of so many dangers, and especially for having taken them from the gates of hell; to whom, filled with the most lively sense of gratitude, they incessantly lift up their hands and voices to say: Be mindful, O Lord, of the prince who has opened this thy sacred asylum for us, and be merciful to him for the mercy which he hath shewn to us thy servants!

1 About sixty thousand pounds sterling.

CHAPTER II.

Of Sieges.

The ancients distinguished themselves no less by the art of forming and sustaining sieges, than by that of making war in the field. It is agreed by all, that they carried these two parts of military knowledge to a very high degree of perfection, which it is difficult for the moderns to exceed. The use of muskets, bombs, cannons, and other fire-arms since the invention of powder, has occasioned the alteration of many things in the manner of making war, especially in sieges, the duration of which has been very much abridged by their means. But these changes have not been so considerable as is generally imagined, and have added nothing either to the merit or capacity of generals.

To treat of what relates to sieges with some order, I shall premise something upon the manner in which the fortifications of the ancients were formed; and shall then give some general idea of the principal machines of war used by them in sieges; and conclude with the manner of attacking and defending places. The Chevalier Follard has treated these several articles very extensively in the second and third volumes of his remarks upon Polybius, and has been my guide in a subject that required the direction of an able and experienced soldier.

ARTICLE I.

Of Ancient Fortifications.

How far soever we look back into antiquity, we find among the Greeks and Romans, cities fortified almost in the same manner with their fosses, curtains, and towers. Vitruvius,* in treating of the construction of places of war in his time, says, that the towers ought to project beyond the wall, in order that when the enemy approaches, the defenders upon the right and left may take them in flank: and that they ought to be round, and faced with many stones, because such as are square, are soon beat down by the machines of war and battering rams, which easily break their angles. He adds after some remarks, that near the towers the wall should be cut within-side the breadth of the tower, and that the ways broke in this manner should only be joined and continued by beams laid upon the two extremities, without being made fast with iron, that in case the enemy should make himself master of any part of the

wall, the besieged might remove this wooden bridge, and thereby prevent his passage to the other parts of the wall and into the towers.

The best towns of the ancients were situated upon eminences. They enclosed them sometimes within two or three walls and fosses. Berosus, cited by Josephus, informs us, that Nebuchadonozor fortified Babylon with a triple enclosure of brick walls of a surprising strength and height. Polybius, speaking of Syringa, the capital of Hyrcania, which Antiochus besieged, says, that city was surrounded with three fosses, each forty-five feet broad, and twenty-two deep; upon each side of these was a double intrenchment, and behind all, a strong wall. The city of Jerusalem, says Josephus, was surrounded by a triple wall, except on the side of the valleys, where there was but one, because they were inaccessible. To these they had added many other works, one of which, says Josephus, had it been completed, would have rendered the city impregnable. The stones, of which it was built, were thirty feet long by fifteen broad, which made it so strong, that it was in a manner impossible to sap or shake it with machines. The whole was flanked with towers from space to space of extraordinary solidity, and built with wonderful art.

The ancients did not generally support their walls on the inside with earth, in the manner of the Talus or slope, which made the attacks more dangerous. For though the enemy had gained some footing upon them, he could not assure himself of taking the city. It was necessary to get down, and to make use of part of the ladders by which he had mounted; and that descent exposed the soldier to very great danger. Vitruvius, however observes, that there is nothing renders a rampart so strong as when the walls both of the curtain and towers are supported by earth. For then neither rams, mines, nor any other machines, can shake them.

The places of war of the ancients were not always fortified with stone walls. They were sometimes enclosed within good ramparts of earth of great firmness and solidity. The manner of coating them with turf was not unknown to them, nor the art of supporting the earth with strong fascines made fast by stakes, and of arming the top of the rampart with a ruff or fraise of palisades, and the foot of the parapet or pas de souris with another: they often planted palisades also in the fosse to defend themselves against sudden attacks. They made walls also with beams crossed over one another, with spaces between them in manner of a chequer, the void parts of which they filled up with earth and stones. Such almost were the walls of the city of Bourges, described by Cesar in his seventh book of the war with the Gauls.

* Vitruv. l. i. cap. 5.

What I shall say in the sequel, when I come to explain the manner of attacking and defending places, will show more distinctly what kind of fortifications those of the ancients were. It is pretended that the moderns excel them very much in this point. The thing is not so indisputable but it may be called in question; though no comparison can be made between them; because their manner of attacking and defending is entirely different. The moderns have retained all they could after the ancients. Fire-arms have obliged them to use other precautions. The same genius is evident in both. The moderns have imagined nothing, that the ancients could use, and have not used. We have borrowed from them the breadth and depth of fosses, the thickness of walls, the towers to flank the curtains, the palisades, the intrenchments within the ramparts and towers, the advantage of many flanks, in multiplying of which only modern fortification consists; this fire-arms makes the more easy to execute. I have heard these remarks made by very able and experienced persons, who with a profound knowledge of the manner in which the ancients made war unite a perfect experience of the modern practice of it.

ARTICLE II.

Of the Machines of War.

The machines most used and best known amongst the ancients for besieging places, were the tortoise, the catapulta, the balista, the corvus or crane, the ram, and moving towers.

SECT. I.

The Tortoise.

The tortoise was a machine composed of very strong and solid timber work. The height of it to its highest beam, which sustained the roof, was twelve feet. The base was square, and each of its fronts twenty-five feet. It was covered with a kind of quilted mattress made of raw hides, and prepared with different drugs to prevent its being set on fire by combustibles. This heavy machine was supported upon four wheels, or perhaps upon eight. It was called tortoise, from its serving as a very strong covering and defence, against the enormous weight thrown down on it; those under it being safe in the same manner as a tortoise under his shell. It was used both to fill up the fosse, and for sapping.

For the filling up of the fosse, it was necessary to join several of them together in a line and very near one another. Diodorus Siculus, speak-

ing of the siege of Halicarnassus by Alexander the Great, says, that he first caused three tortoises to approach, in order to fill up the ditch, and that afterwards he planted his rams upon the space filled up, to batter the wall. This machine is often mentioned by authors. There were, without doubt, tortoises of different forms and sizes.

The machine called *Musculus*, used by Cæsar in the siege of Marseilles, was believed to be also a tortoise, but very low, and of a great length: it would be called in these days a wooden gallery. It is likely that its length was equal to the breadth of the fosse. Cæsar caused it to be pushed on to the foot of the walls, in order to demolish them by sap. Cæsar, however, often distinguishes the tortoise from the *Musculus*.

There were also several other machines intended to cover the soldiers, called *crates*, *plutei*, *vinca*, &c. that were used in sieges, which I shall not undertake to describe here, to avoid prolixity. They may be comprised in general under the name of mantles, or *sheds*.

Besides the tortoise, the wooden machine I have been speaking of, there was another composed of soldiers, which may be ranked in the number of machines of war. A body of soldiers, drawn up together, put their great shields, in the form of gutter-tiles, close to each other over their heads. Well practised in this exercise, they formed so firm a roof, that whatever efforts the besieged might make, they could neither break nor move them. Upon this first tortoise of soldiers, a second was made to mount; and by this means they sometimes rose to an equal height with the walls of the place besieged.

SECT. II.

Catapulta. Balista.

I join these two machines together, because though authors sometimes distinguish them they also often confound them, and it would be difficult to settle exactly the difference between them. They were both intended for discharging darts, arrows, and stones. They were of different sizes, and consequently produced more or less effect. Some were used in battles, and might be called field-pieces, others were employed in sieges, which was the use most commonly made of them. The balista must have been the heaviest and most difficult to carry; because there was always a greater number of the catapultæ in the armies. Livy, in his description of the siege of Carthage, says, that there were an hundred and twenty great, and more than two hundred small catapultæ taken, with thirty-three great balistæ, and fifty-two small ones. Josephus mentions the same difference amongst

the Romans, who had three hundred catapultæ, and forty balistæ, at the siege of Jerusalem.

These machines had a force, which it is not easy to comprehend, but which all good authors attest. Vegetius says, that the balista discharged darts with such rapidity and violence, that nothing could resist their force. Athenæus tells us, that Agesistratus made one of little more than two feet in length, which shot darts to the distance of almost five hundred paces. These machines were not unlike our crossbows. There were others of much greater force, which threw stones of three hundred weight, upwards of an hundred and twenty-five paces.

We find surprising effects of these machines in Josephus. "The darts and force of the catapultæ destroyed abundance of people. The stones from the machines beat down the battlements, and broke the angles of the towers. There was no phalanx so deep but one of these stones would sweep a whole file of it from one end to the other. Things passed this night that showed the prodigious force of these machines. A man who stood by Josephus, had his head taken off by a stone discharged from a distance of three hundred and seventy-five paces."

SECT. III.

The Ram.

The use of the ram is very ancient, and the invention of it ascribed to different people. It seems difficult, and hardly worth the trouble to discover the author of it. The ram was either slung or not slung. The swinging ram was composed of a large beam of oak, resembling a ship's mast, of prodigious length and thickness, with the end armed with a head of iron proportioned to the body, and in the shape of a ram's head, whence it had its name, because it strikes against the walls, as a ram doth with his head against all he encounters. The thickness of the ram should be conformable to its length. Vitruvius mentions one of four thousand talents in weight, that is, four hundred and fourscore thousand pounds,¹ which is not very extravagant. This terrible machine was suspended and balanced equally, like the beam of a pair of scales, with a chain or large cables, which supported it in the air in a kind of building of timber, which was pushed forwards upon the filling up of the fosse to a certain distance from the wall, by the means of rollers or wheels. The building was secured from being set on fire by the besieged by several coverings, with

which it was cased over. This manner of working the ram seems the most easy, and requires no great strength. The heaviest body suspended in the air may be moved with considerable force.

But it is not so easy to comprehend how these rams were carried from place to place. For it is not to be imagined, that beams of such immense thickness and extraordinary length could be found wherever there was occasion for them, and it is certain that armies never marched without these machines. The Chevalier Follard, for want of information in this point from the writers of antiquity, conjectures, that they carried this ram-beam upon a four-wheel carriage of a particular form, composed of very strong timbers; the beam suspended short to a strong stay or cross-beam in form of a gibbet powerfully sustained by all the wood work capable of resisting the most violent shocks, and the whole joined and strengthened well with bindings and plates of iron.

There was another kind of ram which was not suspended or slung. We see upon the column of Trajan the Dacians besieging some Romans in a fortress, which they batter with a ram worked only by strength of arms. They are not covered with any thing, so that both the ram and those who work it, are exposed to the darts of the besieged. It could not in this method of using it produce any great effect.

It has been questioned whether the rams, fixed in the moving towers, or in a kind of tortoise, were slung or not, and there are strong reasons on both sides. My plan does not admit my entering into this dispute.

I shall presently relate the prodigious effects of the ram. As it was one of the machines that hurt the besieged most, many methods were contrived to render it useless. Fire was darted upon the roof that covered, and the timbers that supported it, in order to burn them with the ram. To deaden its blows, sacks of wool were let down against the place at which it was levelled. Other machines were opposed against it to break its force, or to turn aside its head, when battering the works. Abundance of means were employed to prevent its effects. Some of them may be seen in the sieges I have cited in the beginning of this paragraph. Josephus relates a surprising action of a Jew, who, at the siege of Jotaphat, threw a stone of an enormous size upon the head of the ram with such violence, that he loosened it from the beam, and made it fall down. He leaped afterwards from the top of the wall to the bottom, took the head from the midst of the enemies, and carried it back with him. He received five arrows in his body, and notwithstanding those wounds, boldly kept in his post, till,

¹ The Roman pound weighed less than the French by almost a quarter.

through loss of blood and strength, he fell from the wall, and the ram's head with him, with which he would never part.¹

SECT. IV.

Moving Towers.

Vegetius describes these towers in a manner, that gives a sufficiently clear idea of them.² The moving towers, says that author, are made of an assemblage of beams and strong planks, not unlike a house. To secure them against the fires thrown by the besieged, they are covered with raw hides, or with pieces of cloth made of hair. Their height is in proportion to that of their base. They are sometimes thirty feet square, and sometimes forty or fifty. They are higher than the walls or even towers of the city. They are supported upon several wheels according to mechanic principles, by the means of which the machine is easily made to move, how great soever it may be. The town is in great danger, if this tower can approach the walls. For it has stairs from one story to another, and includes different methods of attack. At bottom it has a ram to batter the wall, and on the middle story a draw-bridge, made of two beams with rails of basket-work, which lets down easily upon the wall of a city, when within reach of it. The besiegers pass upon this bridge, to make themselves masters of the wall. Upon the higher stories are soldiers armed with partisans, and missive weapons, who keep a perpetual discharge upon the works. When affairs are in this posture, a place seldom holds out long. For what can they hope who have nothing to confide in but the height of their ramparts, when they see others suddenly appear which command them?

ARTICLE III.

Attack and Defence of Places.

I join the attack and defence of places together, in order to abridge this subject, which of itself is very extensive: I shall even treat only of the most essential parts of it, and that in as brief a manner as possible.

SECT. I.

Lines of Circumvallation and Countervallation.

When the cities were extremely strong and populous, they were surrounded with a fosse and intrenchment against the besieged, and by

another fosse on the side next the country against the troops, which might come to the aid of the place; and these were called lines of circumvallation and countervallation. The besiegers pitched their camp between these two lines. Those of countervallation were against the besieged city, the others against attempts from without.

When it was foreseen, that the siege would be of long duration, it was often changed into a blockade, and then the two lines in question were solid walls of strong masonry, flanked with towers at proper distances. There is a very good example of this at the siege of Plataea by the Lacedæmonians and Thebans, of which Thucydides has left us a long description.—“The two surrounding lines were composed of two walls sixteen feet distant, and the soldiers lay in that space, which was divided into quarters: so that it might have been taken for only one wall with high towers from distance to distance, which occupied the whole interval, in order to enable the besiegers to defend at the same time against those within and those without. The quarters of the soldiers could not be gone round without crossing the towers of the wall, and the top of the wall was skirted with a parapet of osier. There was a fosse, on each side of which, the earth had been used to make bricks for the wall.”³ In this manner Thucydides describes these two surrounding walls, which were of no very great circumference, the city being very small. I have elsewhere related with sufficient extent the history of this siege, or rather blockade, very famous among the ancients, and have observed in what manner, notwithstanding these fortifications, part of the garrison escaped.

The camp of the Roman army before Numantia took up a much greater extent of ground.⁴ That city was twenty-four stadia or a league in circumference. Scipio, when he invested it, caused a line of circumvallation to be drawn, which enclosed more than twice the ground the city stood upon. When this work was finished, another line was thrown up against the besieged, at a reasonable distance from the first, composed of a rampart of eight feet thick by ten high, which was strengthened with strong palisades. The whole was flanked with towers of an hundred feet from each other. It is not easy to comprehend in what manner the Romans completed these immense works; a line of circumvallation of more than two leagues in compass: but nothing is more certain than these facts.

¹ De Bell. Jud. l. iii. c. 16.

² Veget. de re milit. l. vii. c. 17.

³ Thucyd. l. ii. p. 147, &c.

⁴ Appian in Iberic. p. 308.

SECT. II.

Approaches of the camp to the body of the place.

Though trenches, oblique lines, mines, and the like inventions, seem neither often nor clearly expressed in authors, we can hardly doubt with reason, that they were in use among the Greeks and Romans. Is it probable, that with the ancients, whose generals, among their other excellent qualities, had that of taking great care to spare the blood and lives of their soldiers, approaches were made in besieging without any precautions against the machines of the besieged, whose ramparts were so well provided, and whose defence was so desperate? Though there is no mention of this in any of the historians, who might possibly in the description of sieges, omit it as being well known to all the world; we should not conclude, that such able generals either did not know, or neglected, things, on the one side so important, and on the other so easy; and which must naturally have struck every man however little versed in attacking places. But several historians speak of them; and among the rest Polybius, who, describing the siege of the city of Echinna by Philip, concludes with these words: "To cover from the arrows of the besieged, as well those who went from the camp to the works, as those who returned from the works to the camp, trenches were drawn¹ from the camp to the tortoises; and those trenches covered at top."²

Long before Philip, Demetrius Poliorcetes had used the same method at the siege of Rhodes. Diodorus Siculus tells us, "that famous warrior caused tortoises, and galleries, cut in the earth, or covered mines, to be made, for communication with the batteries of rams, and ordered a trench with blinds over head, to cover and secure the troops in going and coming from the towers and tortoises. The seamen and marines were appointed for this service; the work was four stadia in length, or five hundred paces."

It is certain therefore that the use of trenches was well known to the ancients, without which they could have formed no siege. There were different sorts of them. They were either fosses parallel to the front of the attacks, or communications cut in the earth and covered over head, or open, and drawn obliquely to prevent being scoured by the enemy. These trenches are often expressed in authors by the Latin word *aggeres*, which does not always signify *cavaliers* or *platforms*.

The cavaliers were mounds of earth, on which machines were planted, and were thrown up in the following manner. The work was begun at a small distance from that side of the fosse next the country. It was carried on under the cover of mantles, or moving sheds, of considerable height, behind which the soldiers worked in security from the machines of the besieged. This sort of mantles or galleries were not always composed of hurdles and fascines, but of raw hides, mattresses, or of a curtain made of strong cables, the whole suspended between very high masts fixed in the ground, which broke the force of whatever was discharged against it.³ The work was continued to the height of these suspended curtains, which were raised in proportion with it. At the same time the void spaces of the platform were filled up with stones, earth, and any thing; whilst some were employed in levelling and beating down the earth, to make it firm and capable of sustaining the weight of the towers and machines to be planted upon it. From these towers and batteries of balistas and catapultas a hail of stones, arrows, and large darts, were discharged upon the ramparts and works of the besieged.

The terrace which Alexander the Great caused to be raised against the rock of Coriennæ, was very surprising.⁴ That rock, which was supposed impregnable, was two thousand five hundred paces high, and seven or eight hundred round. It was excessively steep on all sides, having only one path, hewn out of the rock, by which no more than one man could ascend without difficulty. It was besides surrounded with a deep abyss, which served it instead of a fosse, and which it was necessary to fill up, in order to approach it. All these difficulties were not capable of discouraging Alexander, to whose valour and fortune nothing was impossible. He began therefore by ordering the high fir trees, that surrounded the place in great numbers, to be cut down, in order to use them as stairs to descend by into the fosse. His troops worked night and day in filling it up. Though the whole army were employed in their turn upon this work, so difficult was it, that they could do no more than thirty feet a day, and something less a night. When it was more advanced, and began to come nearer the due height, they drove piles into both sides of the fosse, at proper distances from each other, (with beams laid cross) in order to support the weight to be laid on it. They then formed a kind of floor or bridge of wicker and fascines, which they covered with earth to equal the height of the side of the fosse, so that the army could advance on a way even

¹ Στεγάς κατάρτις Suidas understands by στεγάς, a long trench: στεγάς διόρυξ, fossa longa. Longus euniculus, et meatus subterraneus.

² Polyb. l. ix. p. 571.

³ Caesar made use of such a curtain at the siege of Marseilles. De bell. civ. l. iii.

⁴ Arrian, l. iv. p. 180.

with the rock. Till then the Barbarians had derided the undertaking, believing it utterly impracticable. But when they saw themselves exposed to the darts of the enemy, who worked upon their terrace behind mantles, they began to lose courage, demanded to capitulate, and soon after surrendered the rock to Alexander.

The filling up of the fosses was not always so difficult as in this instance, but always required great precautions and labour. The soldiers worked under cover in the tortoises, and the like machines. To fill up the fosses, they made use of stones, the trunks of trees, and fascines, the whole mingled with earth. It was necessary that these works should be of great solidity, to bear the prodigious weight of the machines planted upon them, which would have made them fall in, if this kind of causeway had been composed only of fascines. If the fosses were full of water, they began by drawing it off either entirely or in part by different drains, which they cut for that purpose. Whilst these works were carrying on, the besieged were not idle. They ran many mines under the fosse to the part of it filled up, in order to carry off the earth, which they handed from man to man into the city: this prevented the work from advancing, the besieged carrying off as much as the besiegers laid on it. They used also another more effectual stratagem, which was to cut large cavities underneath the works of the latter. After having removed some of the earth without its being discovered, they supported the rest with props or large beams, which they smeared over with grease and other combustibles. They then filled up the void space between the props with dry wood, and such things as would soonest burn, and set them on fire: hence when the props gave way, the whole fell into a kind of gulf, with the tortoises, battering rams, and men employed in working them.

The besiegers used the same artifice to make the walls of places fall down. When Darius besieged Chalcedon, the walls were so strong, and the place so well provided with all necessaries, that the inhabitants were in no pain about the siege.¹ The king did not make any approaches to the walls, nor lay waste the country. He lay still as if he expected a considerable re-enforcement. But whilst the people of Chalcedon had no other thoughts than of guarding their walls, he opened at the distance of three quarters of a league from the city a mine, which the Persians carried on as far as the market-place. They judged themselves directly under it from the roots of the olive-trees, which they knew grew there. They then

opened their mine, and entering by that passage, took the place whilst the besieged were still employed in keeping guard upon the walls.

In the same manner, A. Servilius the dictator took the city of Fidene, having caused several false attacks to be made on different sides, whilst a mine carried on as far as the citadel, opened him a passage there for his troops.² Another dictator (the celebrated Camillus) could not terminate the long siege of Veii, but by this stratagem.³ He undertook to run a mine as far as the citadel of that place. And that the work might not be discontinued, or the troops discouraged by the length of it, he divided them into six brigades, who relieved each other every six hours. The work being carried on night and day, it extended at length to the citadel, and the city was taken.

At the siege of Athens by Sylla, it is astonishing to consider the mines and countermines used on both sides.⁴ The miners were not long before they met and fought furiously under ground. The Romans having cut their way as far as the wall, sapped a great part of it, and supported it in a manner in the air on props of wood, to which they set fire without loss of time. The wall fell suddenly into the fosse with an incredible noise and ruins, and all that were upon it perished. This was one of the methods of attacking places.

SECT. III.

Means used in Repairing Breaches.

The ancients used several methods to defend themselves against the enemy after the breach was made. Sometimes, but not so frequently, they made use of trees cut down, which they extended along the whole front of the breach very near each other, in order that the branches might mingle together; they tied the trunks very firmly to one another, so that it was impossible to separate these trees, which formed an impenetrable fence, behind which a multitude of soldiers were posted, armed with pikes and long partisans. The breaches were sometimes made so suddenly, either by saps above, or under ground, or by the violent blows of the rams, that the besieged often found their works laid open, when they least thought of it. They had recourse on such occasions to a very simple refuge, in order to gain time, and to intrench behind the breach. They threw down upon the ruins of the wall a prodigious quantity of dry wood, and other combustible matter, to which they set fire: this occasioned so violent a

¹ Polyb. l. v. c. 5.

² Liv. l. iv. n. 22.

³ Ibid. l. v. n. 19.

⁴ Appian de bell. Mithrid. p. 193.

flame, that it was impossible for the besiegers to pass through it or approach the breach. The garrison of Haliartus in Bœotia thought of this remedy against the Romans.⁵ But the most usual method was to erect new walls behind the breaches, which are now called in French, *retirades*, retrenchments. These works generally were not parallel with the ruined walls. They described a kind of semicircle towards the place, of which the two ends joined the two sides of the wall that remained whole. They did not omit to cut a very large and deep fosse before this work, in order to oblige the assailants to attack it with the whole train of machines, which would be used against walls of the greatest strength.

Sylla, having beat down great part of the walls of the Piræum with his battering rams, caused the breach to be immediately attacked, where so furious a battle ensued, that he was obliged to sound a retreat.⁶ The besieged, improving the opportunity this gave them, immediately ran a second wall behind the breach. Sylla, perceiving it, made his machines advance to batter it, rightly judging, that being newly built, it could not long resist their violence. The effect answered with no great difficulty, and he immediately ordered the assault to be given. The action was warm and vigorous; but he was at last repulsed with loss, and obliged to abandon his design. History abounds with examples of this kind.

SECT. IV.

Attack and Defence of Places by Machines.

The machines most used in sieges were, as I have observed before, the catapulta, balista, tortoises, battering rams, and moving towers. To know the force of them, the reader need only turn back to the relations of the most important sieges treated in this history, such as those of Lilybæum in Sicily by the Romans; of Carthage by Scipio; of Syracuse, first by the Athenians, and afterwards by Marcellus; of Tyre by Alexander; of Rhodes by Demetrius Poliorcetes; and of Athens by Sylla.

I shall cite here no more than one, of which I shall repeat only some, detached, but very proper, circumstances, in my opinion, to show the manner in which the ancients attacked and defended places, and the use they made of machines of war. This is the famous siege of Jerusalem by Titus, related at large by the historian Josephus, who was an eye-witness of the whole.

The city of Jerusalem was fortified with a triple wall, except on the side of the valleys, where there was but one, because they were inaccessible.⁷ Titus began by causing all the trees in the neighbourhood to be cut down, and made use of that wood in erecting several platforms or terraces. The whole army were employed in this work; the workmen were covered by hurdles and gabions. The Jews omitted nothing on their side, that might contribute to their defence: the ramparts were soon covered with a great number of machines.

The first wall was first attacked. When the platforms were erected, Titus caused the rams to be planted upon them, with the other machines to annoy the enemy, and battered the wall in three different places. The Jews perpetually poured an incredible number of fires and darts upon these machines, and the soldiers that worked the rams. They made also several sallies to set them on fire, and were repulsed with great difficulty. Titus had caused three towers to be erected on these platforms, each of seventy-five feet in height, to command the ramparts and works of the place. In the night, one of these towers fell of itself, and occasioned a great consternation throughout the whole army. They galled the besieged exceedingly, for they were full of portable machines, slingers, and archers, who poured a continual shower of darts, arrows, and stones, upon them, which they did not know how to remedy, because they could neither raise platforms of an equal height with those towers, nor throw them down, they were so strong; nor burn them, because they were covered all over with plates of iron. Nothing, therefore, being able to retard the effect of the rams, and those dreadful machines perpetually advancing, the Jews abandoned the first wall, after a defence of fifteen days. The Romans entered the breach without difficulty, and opened the gates to the rest of the army.

The second wall gave them no great trouble: Titus soon made himself master of that with the new city. The Jews then made very extraordinary efforts, and drove him out of them, and it was not till after a continued and very rude battle of four days, that he regained them.

But the third wall cost him much labour and blood, the Jews refusing to hearken to any proposals of peace, and defending themselves with an obstinacy, that resembled rather the madness and fury of men in despair, than valour and fortitude.

Titus divided his army into two bodies, in order to form two attacks on the side of the fort Antonia, and made his troops work in erecting four terraces, upon each of which a legion was

⁵ Liv. l. xlii. n. 63.

⁶ Appian de bell. Mithrid. p. 194.

⁷ Joseph. bell. Jud. l. i.

employed. Though the work was carried on night and day, it took up above fifteen days to complete it; at the end of which the machines were planted upon it. John and Simon were at the head of the seditious, who ruled all things in the city. The first caused a mine to be run as far as the terrace in the front of the fort Antonia, the ground under it to be supported by props, a great quantity of wood prepared with rosin and pitch to be carried into it, and then ordered it to be set on fire. The props being soon consumed, the terrace fell in with a dreadful noise. Two days after, Simon attacked the other terraces, on which the besiegers had placed their rams, and begun to batter the wall. Three young officers, followed by soldiers as determinate as themselves, opened their way, with torches in their hands through the midst of their enemies, as if they had nothing to fear from the multitude of darts and swords, and did not retire till they had set fire to the machines. When the flames began to rise, the Romans ran from their camp to save their machines. The Jews repulsed them by the shower of darts from the top of their walls, where they had three hundred catapultæ and forty ballistæ. They also sallied in large bodies, and despoising danger, came to blows with those who advanced to extinguish the fire. The Romans used their utmost endeavours to draw off their rams, of which the covers were burnt; and the Jews, to prevent them, continued amidst the flames without giving way. The fire from the machines caught the terraces, the Romans not being able to hinder it. So that, seeing themselves surrounded on all sides with the flames, and despairing of all means to preserve their works, they retreated to their camp. They were inconsolable for having lost in one hour, by the ruin of their works, what had cost them so much time and pains, and many, seeing all their machines destroyed, despaired of ever being able to take the place.

But Titus did not lose courage. Having called a great council of war, he proposed the building of a wall round the city, to deprive the besieged of all hopes of receiving aid or provisions, of which they began to be in want. This advice was generally approved of, and the troops recovered spirit. But what seems incredible, and was truly worthy of the Romans, is, that this great work, which appeared to require three months for the execution of it, the city being two leagues in circumference, was begun and finished in three days. The city being enclosed in this manner, the troops were posted in the towers with which the new wall was flanked at proper distances. Titus at the same time caused four more terraces to be raised against the fort Antonia, larger than the former. They were completed in twenty-one days, not-

withstanding the difficulty of finding the wood necessary for so great a work.

John, who commanded in fort Antonia, in order to prevent the danger consequent upon a breach being made by the besiegers, lost no time in fortifying himself; and to try all things before the rams began to batter, he made a sally with torches in hand, in order to set fire to the enemy's works, but was obliged to return without being able to approach them.

The Romans then advanced their rams to batter the tower Antonia: but seeing, notwithstanding reiterated efforts, that they could not make a breach, they resolved to sap it, and covering themselves with their bucklers in form of a tortoise, against the quantity of stones and flints, which the Jews poured down upon them, they persevered to work in such a manner with their levers and hands, that they loosened four of the stones in the foundation of the tower. Night obliged both sides to some respite: and in that time, the part of the wall, under which John had caused the mine to be run, by the means of which he had ruined the first terraces of the Romans, being weakened by the strokes they had given it, fell down on a sudden. The Jews the same moment raised another wall behind it. As it was so newly built, it was expected, that it would be the more easily thrown down: but nobody dared be the first to assault it, so much the determined courage of the Jews had dismayed the troops. Several attempts were however made, but without success. Providence opened them another way. Some soldiers, who guarded the terraces, got up without noise towards the close of the night by the ruins of the wall into the fort Antonia. They found the sentinels upon the advanced posts asleep, and slew them. Having made themselves masters of the wall in this manner, they caused their trumpets to sound, which they had taken care to bring with them. Upon that alarm, the guards at the other posts, imagining the number of the Romans much greater than it was, were seized with such fear that they fled. Titus came up soon after with part of his troops, and entering by the same ruins pursued the Jews to the gates of the temple, which they defended with incredible valour. The action was very hot, and continued at least ten hours. But at length the fury and despair of the Jews, who saw their safety, depended upon the success of this battle, prevailed over the valour and experience of the Romans. The latter thought proper to content themselves with having taken fort Antonia, though only a part of their army was present in the battle.

Several other assaults passed which I omit. The greatest of the rams, that Titus had caused to be made, and planted upon the platform, battered the walls of the temple continually for

six days, without being able to make any more progress than the rest; of such proof was that superb edifice against their efforts. The Romans having lost all hopes of succeeding by attacks of this kind, resolved to proceed by scaling the walls. The Jews, who had not foreseen it, could not prevent them from planting their ladders. But never was resistance greater than theirs. They threw down such as had got on the wall, killed those upon the upper steps of the ladders before they could cover themselves with their shields, and even threw down the ladders quite covered with soldiers, which cost the Romans many men. The rest were obliged to retire without being able to succeed in the attempt.

The Jews made many sallies, in which they fought with the utmost fury and desperation, and killed many of the Romans. But Titus at last made himself master of the temple, to which, notwithstanding the most severe orders to the contrary, a soldier set fire, and it was consumed entirely. And thus the prediction of Jesus Christ concerning it was accomplished.

CHAP. III.

Of the Navies of the Ancients.

I have spoken elsewhere of the maritime affairs of the ancients, their vessels, and naval troops. I must beg the reader to have recourse to what I have said there, to supply what may be wanting in this place.

Nothing certain can be said concerning the origin of navigation. We may, however, be assured, that the oldest vessel mentioned in history, is Noah's ark, of which God himself gave the design, and directed the form and all the measures, but solely with the view which he had of its containing the family of Noah, and all the animals of the earth and air. This ark, without doubt, was in its beginning gross and imperfect: planks, rafts, small boats, and little barks. The manner in which fish move in the water, and birds in the air, might suggest to mankind the thought of imitating the aids nature has given those animals by oars and sails. At all events, they have attained by degrees the art of building vessels in the perfection we now see them.

The ships of the ancients may be divided into two kinds:—those for transporting merchandise, *onerariae naves*; and ships of war, often called long ships, *longae naves*.¹

The first were small vessels, which were commonly called *open barks*, because they had

no deck. These little barks had no beaks, called *rostra*, used in sea fights, to run against and sink the enemy's ships.

The long ships used in war were of two sorts. The one had only one bench of oars on each side, the other more. Of those which had only one bench, some had twenty oars, *disiropes*; others thirty, *triasiropes*; some fifty, *pentasiropes*; or even an hundred, *hecatasiropes*. Nothing is more common than these names of ships in Greek authors. The rowers were placed half on one side of the vessel, and half on the other, on the same line. Among the vessels of several benches of oars, some had two only, *biremes*; others three, *triremes*; some four, *quadrيرهmes*; others five, *quinqueremes*; and others a greater number, as we shall see in the sequel. Those most spoken of by authors, and of which the ancients made most use in battles, were the *triremes* and *quinqueremes*: by which names the reader will permit me to express the vessels with three and five benches of oars.

We find in all the ancient authors a clear and evident distinction between these two sorts of vessels. Some were called *triasiropes*, ships of thirty oars; *pentasiropes*, ships of fifty oars, &c. and these were ranked in the number of small ships. We shall see presently the difference there was in the number of the crews on board each of them. The latter were distinguished by their several benches of oars, as well as magnitude. And Livy says expressly: *Quinqueremis Romana—pluribus remorum ordinibus scindentibus vortices*; ² as well as Virgil, *Terno consurgunt ordine remi*.³ It is therefore not to be doubted, that the ancients had vessels with several benches of oars, from two, three, four, five, six, to thirty or forty: but those only of a small number of benches were of use: the rest being chiefly for show.

To know how these several benches of oars could be put in motion, is a difficulty, and has always been a matter of dispute among the learned moderns, which in all probability may continue for ever undecided.⁴ The most able

² Liv. l. xxxvii. n. 30.

³ Æn. l. v.

⁴ It may be proper to notice here the various theories that have been advanced on this subject; for it unfortunately happens that no detailed account or explicit evidence has come down to us, whereby the mode in which the banks of oars were arranged might be satisfactorily ascertained; the only source of information being the mere casual allusions of historians and poets, who have naturally avoided to encumber their narration with technical details of construction. Upon Trajan's column, indeed, vessels are sculptured, supposed to be those of two and three banks of oars; but the figures and mechanical proportions upon it are so confused and crowded that nothing can be safely determined from this authority. So also, in the rostrated column of Duilius, erected to commemorate his naval victory over the Carthaginians, and discovered about two centuries and a half

¹ Bomilear centum triginta navibus longis, et septingentis onerariis profectus. Liv. l. xxv. n. 27.

and experienced persons in naval affairs among us, believe the thing utterly impossible. And indeed it would be so, if we suppose, that these different ranks of oars were placed perpendicu-

larly over one another. But we see the contrary upon Trajan's column, on which the biremes and triremes have their benches placed obliquely, and, as it were, by steps one above the other.

ago at Rome, only the beaks of galleys are projected from the shaft of the pillar, and no part of the banks of oars is exhibited. Several paintings of ancient vessels have likewise been discovered in the ruins of Herculaneum, but so much effaced that nothing can be gathered from them to throw any light on the subject. In the absence, therefore, of all direct evidence, recourse has been necessarily had to conjecture; and in detailing the several suppositions that have appeared on the subject, we shall follow pretty closely Mr. Howell, who, in his "Essay on the War Gallies of the Ancients,"^a has advanced by far the most feasible and satisfactory conjecture that has been made—acknowledging, at the same time, our obligations to a well-written critique on the above Essay, in the Monthly Review for December, 1826.

The object of discussion on the structure of the ancient galley may be gathered from the text. It will be there seen, that the war vessels of the ancients were designated and rated according to the number of the banks of oars by which they were impelled. There were, generally, two classes of war galleys—one of a single line of oars, and the other of two, three, five, seven, or more banks, all of which were, at different periods, employed in naval engagements. The form of vessels of one bank of oars may be readily imagined; but the construction of the numerous class of galleys of more than one bank, is a point fruitful of conjectures and perplexities.

The first idea, perhaps, on the subject, which would occur to all, is, that the different banks of oars in the galleys were placed one above another. Morisotus, in his *Orbis Maritimus*, holds this opinion, and quotes a passage from the emperor Leo, which he thinks conclusive. The words are: "Every ship of war must be of its due length, having two ranks of oars, the one higher, and the other lower." But the naval practice of the Byzantine empire can prove nothing on this question. Since the victory of Actium, which Augustus ascribed to his Liburnian galleys of one bank, the naval science of antiquity had certainly declined. The galleys of many banks had been laid aside; and the *dromones*, or vessels of two tiers, of Leo, would bear only a faint resemblance to the majestic construction of more vigorous ages. If the rating of the galleys had ascended no higher than three or five tiers, there would be little difficulty in imagining them to have been disposed as Morisotus affirms; but it is well known that galleys were constructed and used in naval warfare, not only of five and seven tiers, but even of twelve, by Alexander the Great; of fifteen, by Ptolemy Soter; and of sixteen, by Philip, father of Perseus: And, finally, Ptolemy Philopater built one of no less than forty banks of oars. This last was designed, doubtless, for display; but still it was used; and the galleys of fifteen or sixteen banks were certainly employed in actual warlike service. Nothing can be more idle than the attempt of some to impugn the fact, merely to support a favourite conjecture. Now, it is quite needless to dwell on the absurdity of supposing that any oar could be constructed of sufficient dimensions to be worked at the height of forty, or even fifteen tiers from the water. The great length of oar, which such an arrangement would require, may be seen by a proportional diagram of three lines, and will at once render the idea perfectly incredible to any rational mind. In the

same manner it is demonstrable, that an oar fifty-seven feet long cannot be placed to pull with any effect, if its row-lock be more than ten feet above the horizontal line of the water, without rising at the upper end to a strangely inconvenient height, while, with the blade or lower end, it will make a most immoderate or impracticable dip. Yet thirty-eight cubits or fifty-seven feet is the precise length assigned by Athenæus to the longest oars of Ptolemy's galley of forty banks. If these oars, then, could only have been ten feet above water in the highest tier, how can we possibly imagine any consistent arrangement of forty, or even ten tiers below, ascending either perpendicularly or obliquely in chequer? The thing is absurd.

The second solution that has been proposed is, that the different banks of oars were ranged, not one above another, but in one continuous line along the side of the galley; the first in her bows, the second in her waist, the third in her stern, when a trireme; and if of a greater rank, the different banks were still added on the same line from prow to poop, with intervals between. This opinion has many supporters of great learning and merit. Though maintained by Stewechius and Castillonius, it is not more tenable than the last, and the faint representations left on Trajan's column are directly contrary to this hypothesis. It is not necessary here to quote the numerous passages in almost every author, which occur at variance with this theory, and not to be reconciled with it. One or two objections only may be stated. In building a galley after this manner, the loss of power is great, and needlessly thrown away, by breaking up the continuous range of oars that otherwise would have been obtained along the sides of the vessel, to gain no apparent advantage. Besides, the length of a galley even of ten oars, constructed according to this hypothesis, must have been enormous, and far exceeded the forty tier galley of Ptolemy, the length of which, Athenæus expressly says, was 280 cubits, or 420 feet. Her longest oar was 57 feet. A less distance than four feet cannot be allowed between each rower's seat for oars of this length, as one third at least of the oar must be within the scum, to pull with any effect. Thus, four times forty is 160, for forty oars, leaving 260 feet, a part of which would be consumed in the curvature of her stem and stern: she could not have had three oars in a bank, as three times forty is 120, the distance of four feet between is four times 120, or 480 feet, that is, 60 feet more than her length, so that she could only be, were this opinion correct, a galley with one bench of oars. Independent of this, we are told she had longer and shorter oars, and these would evidently be quite unnecessary in a galley so constructed.

A modification of this conjecture has been proposed by the Chevalier de Lo Loos, who, in his *Recherches d'Antiquités Militaires*, suggests, that the ordinary trireme had three separate ranges of oars in the bows, the waists, and the stern quarter, not exactly in a continuous line, but each range rising a little above the other from stem to stern; that by raising a second tier upon one, two, or all of the three, the vessel would be converted into a quadrimme, a quinquireme, or a hexirime, respectively; that, in like manner, five or six tiers upon each range would raise the vessel into a galley of fifteen or eighteen banks; and thus in all the intermediate rates. In the case of a galley of a yet higher rate and greater length,

• Edinburgh, Blackwood, 1826.

The arguments opposed to the opinion of those who admit several ranks of oars in vessels, are, it must be owned, very strong and conclusive: but what force can the best reasons in the world

he supposes that there might have been two ranges in a line in the bows, and the same in the waist and stern quarter; and six tiers upon each would thus give thirty-six banks. In the instance of Ptolemy Philopater's galley of forty banks, there would be six tiers upon four of the ranges, and eight upon the other two. This plan, though somewhat fanciful, is plausible, and may be reconciled with the descriptions of ancient authors extant on the subject.

Another method of arrangement was advanced so far back as the sixteenth century by Sir Henry Savile, who supposes that the cars were not placed one above another in a straight line, neither in a line from stern to stern, but were arranged in an oblique manner from the sides of the galley to her middle. But this would require the galleys to be built of a breadth incompetent quite with their title—*naves longæ*—even were it possible to place the rowers to work efficiently, which it is not.

The next suggestion which claims attention is, that the *trireme* received its name from three men pulling at the same oar, the *quinquireme* from five, and so on. But this hypothesis becomes at once untenable, when we recollect that Ptolemy's galley must thus have had forty men to each oar, and must have had all its oars in a single line, which it certainly had not; as appears by a passage in Athenaeus, in which oars "of the highest rank" are spoken of in evident contradistinction to those of other tiers. Many other passages from ancient writers might be adduced, destructive to this theory.

The theory maintained by Vossius in his treatise on the *Trirème* and *Liburnice*, and in which Le Roy very nearly coincides, goes very little farther to remove the difficulties of the question. These authors, aware of the utility of supposing either that the oars were all in one line, or could be used in fifteen or forty horizontal tiers, are willing to compound former hypotheses, by concluding that the tiers rose obliquely over each other to the number of five or seven; and that, beyond this height, the rating was estimated only by the number of men to an oar. Thus, in the galley of forty banks, there would be five tiers with twelve men at each oar of the highest, ten at the next below, and so on until the lowest oar had only four rowers, to make forty in all. But if a galley were under-manned, her rate would thus be lowered at once; and this change is never noticed by the historians, though they often speak of the galleys being without their full complement of men. It often occurs in modern warfare that a ship is under-manned, yet it does not alter her rate: neither did it with the ancients.

The last hypothesis, which had been generally received before the publication of Mr. Howell's essay, and which had even received the approval of the learned Mitford, is that of General Melvill. It was published in 1773,¹ and agrees with that of Vossius and Le Roy in placing the tiers one above the other obliquely, the higher rowers being chequered in quincunx with the lower; but it allows only one man to each oar. It farther supposes, that, for the working of the oars with greater effect, a gallery, in which the rowers were placed, projected from

have against real facts, and an experience confirmed by the testimony of all the ancient writers.

It appears, that the rowers were distinguished from the place or step where they sat.¹ The

1 Interp. Aristoph. in *Ranis*.

the side of the vessel, a little above the water-mark, at an angle of 45°. But such construction will at once appear totally inapplicable to any galley of more tiers than five or six, and the projecting galleries even of these must have rendered the vessel 'crank and difficult to trim.' Besides, as it allows only one man to an oar, the galley of Ptolemy Philopater, which we are informed was manned with four thousand rowers, must, according to this theory, have had the incredible number of two thousand oars on a side.

Mr. Howell's theory is as follows. After detailing the inconveniences which would be found in the early war galleys of a single arrangement of oars occupying the whole vessel's length, and neither leaving a deck for the soldiers to fight upon, nor admitting of a commanding height whence to discharge their missiles, he proceeds to unfold the idea which, according to his supposition, must have struck the Erythraean, who are generally admitted to have been the first to substitute galleys of two banks for the old ones of a single tier. Suppose a vessel of the original form, pulling twenty oars, ten on each side, thus:—

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the Erythraeans, he imagines, found, that, without adding to the length of the vessel, they could have the same number of oars in nearly one half of the length, by placing the oars obliquely, thus, up the side of the galley :

By this means the rowers being all placed in the midships, ample room would be left for an elevated deck for combat at the poop and prow. Thus, then, according to Mr. Howell, originated the creation of a bireme; and when this idea was once started, of placing the banks of five oars each obliquely, the extension of the plan was easy to an indefinite degree, simply by adding to the length of the galley, without at all increasing her height. The oar-ports of a trireme would, for instance, appear thus:—

a quinquireme thus :—

and so on, until the galley of Ptolemy Philopater would count forty of these oblique ascents, behind one another

* Thesaurus Antiq. de Rom. Gronovius, tom. xii.

† Sur la Marine des Anciens; in the Mémoires de l'Académie des Inscriptions, tom. xxxviii. p. 542.

t. *History of Greece*, vol. xxi, p. 542.

¹ History of Greece, vol. ii. Appendix to chap. viii.

See Pownall's Treatise on the Study of Antiquities, Appendix, No. III.

lowest were called *Thalunites*, those in the middle *Zugites*, and those above, *Thranites*.¹ The latter had larger pay than the others, without doubt, because they handled longer and heavier oars than those of the lower benches. It is still a question, whether in large vessels each oar had only one man to it, or more, as now in the gal-

¹ Thucyd. I. vi. p. 431.

lley from stem to stern, and each of five oars, without being necessarily higher in the water than a breme. "That a rank or bench of oars," says Mr. Howell, "never contained more than five oars I think can be proved, whatever the size of the galley was, whether a breme or trireme, up to the galley of Philopater, which had forty banks, nine feet being the highest point from the water for the scalmi from which they could pull with effect. That the scalmi of Philopater's galley did not exceed this, is evident from Athenæus, lib. v. c. 37. The longest oar was 38 cubits or 57 feet; there could not be less than three feet from the water's edge to the lower edge of the oar-port, and 18 inches for the width of it. That they were so wide was necessary for the size of the oar, and we learn it also from a curious fact. Megabates, visiting the fleet, found a Grecian galley without its guard, and thus he punished the captain; Herodotus, (lib. v. csp. 33.) Διὰ τῆς ἀσφαλείας διέσωσε τὸν πλοῦν. The meaning evidently is, 'he bound him to the lowest bench, with his head out of the oar-port.' This he could not have done had the oar-ports been less. Now, from the lower bench to the upper bench inside, five feet is sufficient for both man and oar. The benches being placed sloping from the lowest up to the fifth or highest, the outer edge of the upper oar-port would be four feet six inches from the upper edge of the under port, whose width is eighteen inches, so that nine feet is all that was required for the height of a bank's ascent. Adopting this idea, the difficulty of the subject is at once removed, and, when once this method of placing the oars was found out, expense or convenience were the only objects to be studied by the ancients, for nothing could be more easy than adding to the length of the galley according to the number of banks required, even up to one hundred, could such a large vessel have been easily navigated."

The Monthly Reviewers, although inclined to question, in one or two particulars, the above theory, admit, generally, that it supersedes all others in probability, and is in agreement with most of the passages referring to galleys and matters of military marine in the ancient authors. It at once obviates, say they, the absurdity contained in that monstrous supposition, that even forty banks must have been placed one over another. Nor would there be any inconvenience in the oblique ascending series of five oars in each bank. It justifies also the general title, applied to war-galleys—*naues longæ*; the appropriateness of which would be utterly lost in the huge proportions of a galley of forty, or even ten banks rising one above another: while it agrees with the inevitable deduction from various writers, and from the imperfect representation on Trajan's column, that there were at least several ascending tiers of oar-ports, requiring oars of various lengths. It moreover is in accordance with the appearance of the galleys on Duilius's rostrated column; on which, in the beaks of the vessels (the only part represented) there are no oars: leading us to conclude that these were placed only in the waist.

It remains to add, that Mr. Howell has presented the directors of the Edinburgh Academy with a model of a Hexireme, constructed according to his theory.—*Ed.*

leys of France. In the biremes and triremes on the column of Trajan, there is only one rower to a bench on each side. It is very probable, that there were more in larger vessels: but I avoid entering into discussions, which would carry me a great way beyond the extent of my plan.²

There are descriptions in Athenæus of ships of astonishing and incredible magnitude. The two first were Ptolemy Philopater's, king of Egypt.³ One of them carried forty benches of oars, and was four hundred feet long, and fifty-seven broad. Four thousand rowers hardly sufficed to put this enormous hulk in motion. It was launched by a machine, composed of as much wood as would have made fifty vessels of five benches of oars. How shall we conceive the practical use of the fifty benches of oars in this vessel? But indeed they were chiefly for show.

The other ship called *Talamega*, because it had beds and apartments in it, was three hundred twelve and a half feet in length, and forty-five in its greatest breadth. Its height, including the tent or pavilion upon its deck, was almost sixty feet. All around it, (except the head,) there was a double gallery of immense extent. It was really a floating palace. Ptolemy caused it to be built to carry himself and his whole court upon the Nile. Athenæus does not mention the number of its ranks or benches of oars.

The third vessel is that which Hiero II., king of Syracuse, caused to be built under the direction of the famous Archimedes.⁴ It had twenty benches of oars, and was of incredible magnificence. No port of Sicily being capable of containing it, Hiero made a present of it to Ptolemy Philopater, and sent it to Alexandria. Though the hold or sink was very deep, one man emptied it by the means of a machine invented by Archimedes.

These vessels, which were chiefly for show, have, properly speaking, no relation to the subject I treat. As much may be said of that of Philip, the father of Perseus, mentioned by Livy. It had sixteen benches of oars, but could scarce be made to move, on account of its magnitude.

What Plutarch says of the galleys of Demet-

² There is every reason to believe that there must have been generally several men to one oar; for Suetonius says expressly, that the Liburnian galley of a single tier, of Caligula, had ten men to each oar; while Pliny speaks of a smaller one of the same class with five men to each; and if the light Liburnian required several men to an oar, it is very improbable that the loftier built galleys of earlier times, with several banks, could have been worked efficiently by single rowers.—*Ed.*

³ Athen. I. lii. p. 204—206.

⁴ Ibid. p. 206, 209.

rius Polliorcetes is very surprising, and he takes care to apprise the reader that he speaks with the strictest truth, and without any exaggeration.⁵ That prince, who it is known, was well versed in the arts, and very inventive in regard to machines of war, had also caused several galleys of fifteen and sixteen benches of oars to be built; not merely for ostentation, as he made a wonderful use of them in battles and sieges. Lysimachus not being able to believe what was said of them, sent to desire him, though his enemy, to let his galleys row before him: and when he had seen their swift and easy motion, he was inexpressibly surprised, and could scarce venture to believe his own eyes. These vessels were of astonishing beauty and magnificence; but their lightness and agility seemed still more worthy of admiration, than their size and splendour. But we will confine ourselves to those which were more known and common, I mean, principally the galleys of three, four, and five benches of oars; and make some observations upon their use in battle.

There is no mention in Homer of vessels with several benches of oars:⁶ it was not till after the Trojan war that the use of them was introduced: the particular era is unknown. The Corinthians were the first, who changed the ancient form of the galleys, and built those of three benches of oars, and perhaps also of five. Syracuse, a Corinthian colony, piqued herself, especially in the time of Dionysius the elder, upon imitating the industry of the city, from which she derived her origin; and even at length surpassed it, by carrying that to perfection, which the former had only designed. The wars, which she had to support against Carthage, obliged her to devote all her care and application to naval affairs. These two cities were at that time the greatest maritime powers in the world. Greece, in general, had not yet distinguished herself in this respect. It had been the plan and design of Lycurgus absolutely to prohibit the use of navigation to his citizens; and that from two motives, equally worthy the wise and profound policy of that legislator. His first view was to remove from his republic all commerce with strangers, lest such intercourse should alter the purity of its manners, and weaken the severity of the maxims he had established. In the second place, he was for banishing from the Lacedæmonians all desire of aggrandizing themselves, and all hope of making conquests; considering that dire ambition as the ruin of states. Sparta therefore at first had only a very small number of ships. Athens was originally no better provided with them. It was Themistocles, who, penetrating into the future, and fore-

seeing at a distance what they had to apprehend from the Persians, converted the whole power of Athens into a maritime force, equipped upon a different pretext a numerous fleet, and by that wise provision, preserved Greece, obtained immortal glory for his country, and put it into a condition to become in a short time superior to all the neighbouring states.

During almost five ages, Rome, if Polybius may be believed, was entirely ignorant of what a vessel, galley, or fleet was. As she was solely employed in subjecting the surrounding states, she had no occasion for them. When she began to send her troops into Sicily, she had not a single bark of her own, and borrowed vessels of her neighbours to transport her armies.⁷ But she soon perceived, that she could not oppose the Carthaginians, whilst they were masters of the sea. She therefore conceived the design of disputing the empire of it with them, and of equipping a fleet. A quinqueremis, which the Romans had taken from the enemy, gave birth to the thought, and served them for a model. In less than two months they built an hundred galleys of five, and twenty of three benches of oars. They formed mariners and rowers by an exercise before unknown to them; and in the first battle they gave the Carthaginians, they overcame them, though the most powerful nation of the world by sea, and the most expert in naval affairs.

The fleet of Xerxes, when it set out from Asia to attack Greece, consisted of more than twelve hundred galleys with three benches of oars, of which each carried two hundred and thirty men; and three thousand galleys of thirty or fifty oars, besides transports, which on an average carried fourscore men.⁸ The other galleys, supplied by the provinces of Europe, had each two hundred men on board. Those which set out from Athens, during the Peloponnesian war, to attack the Syracusans, carried as many. Hence we may suppose the usual complement of those vessels was two hundred men. I could have wished, that historians had distinguished clearly in regard to these two hundred men, who were the complement of the ships; how many of them were merely seamen, and how many soldiers. Plutarch, in speaking of those of the Athenians, that were in the battle of Salamin, observes, that each of the hundred and fourscore galleys, of which their fleet consisted, had only eighteen fighting men on board, of whom four were archers, and the rest heavy armed troops: which is a very small number.⁹

The battle of Salamin is one of the most famous of antiquity: but we have no very parti-

5 Plut. in Demetr. p. 807. 6 Thucyd. i. i. pp. 8—10.

7 Polyb. i. i. p. 23.

8 Herod. i. vii. c. 89.

9 Plut. in Themist. p. 119.

cular account of it.¹ The Athenians distinguished themselves in it by invincible valour, and their commander still more by his ability and prudence. He persuaded the Greeks, not without much difficulty, to stop in a strait, which rendered the superiority in number of the Persian vessels useless: and he delayed engaging, till a certain wind very contrary to the enemy began to blow.

The last battle of the Athenians, in the port of Syracuse, occasioned their ruin. Apprehending the beaks of the enemy's galleys, of which they had a sad experience in the former actions, Nicias provided grappling irons in order to prevent their effect, and to come immediately to blows as upon shore. But the enemy, who perceived it, covered the heads and upper parts of their galleys with leather, in order to give less hold to the grapples, and avoid being boarded. Their discharges did much greater execution. The Athenians were overwhelmed by a hail of stones, which never missed their aim, whilst their darts and arrows were almost always ineffectual, from the motion and agitation of the vessels. Their ancient glory and power suffered shipwreck in this last battle.

Polybius has a short but very fine description of a sea-fight, which was to the Romans a happy omen of the future, and made way for the conquests, which were to assure them of the empire of the sea. It is that of Myla in Sicily against the Carthaginians, in which the consul Duillius commanded. I have related it in the history of the Carthaginians. What is particular in this battle, is a machine of a new invention, made fast to the top of the heads of the Roman ships, and called *Corvus*. It was a kind of crane, drawn up on high and suspended by cords, which had a heavy cone of iron, called *Corvus*, at its extremity that was let down with impetuosity upon the ships of the enemy, to break through the planks of the decks, and grapple them. This machine was the principal cause of the victory, the first the Romans ever gained at sea.

The same Polybius describes more extensively a famous naval battle near Ecnoma, a city of Sicily. The Romans, commanded by the consuls Atilius Regulus, and L. Manlius, had three hundred and thirty deck ships, and a hundred and forty thousand men, each vessel carrying three hundred rowers, and one hundred and twenty soldiers. The Carthaginian fleet commanded by Hanno and Amilcar had three hundred and fifty vessels, and above one hundred and fifty thousand men. The design of the former was to carry the war into Africa, which the others were extremely interested to prevent. Every thing therefore was disposed for a battle. The order of battle of the Romans

at this time was quite unusual. They did not draw up in one or more lines, which was very common, lest the enemy should get between their lines with the advantage of their number, and they took care to face on all sides. Besides, as the enemy's strength consisted in the agility of their ships, they thought it necessary to row in an oblique line, and observe an order of battle not easy to be broken. For this purpose, the two ships of six benches, on board of which were the consuls Regulus and Manlius, were placed in the front, side by side. They were each followed by a file of ships; called the first and second fleet. The vessels of each file stood off, and enlarged the file as they drew up, turning their heads outwards. The two first fleets being thus drawn up in the form of a beak or wedge, the third line of ships was formed, called the third fleet. This closed the space, and faced the enemy; so that this order of battle had the form of a triangle. These three lines composed a kind of divided whole, consisting of three fleets; for so they were called. This third line, or third fleet, towed the transports, on board of which were the cavalry, which formed a second body. And lastly, the fourth fleet, or the *Triarii*, (for so it was called) brought up the rear, in such a manner, that it extended beyond the two sides of the line in front of it: and this was the third body. In this disposition the order of battle represented a wedge or beak, of which the fore part was hollow, and the base solid; but the whole strong, fit for the action, and hard to break.

The Carthaginians, on their side, drew up almost their whole fleet in one line. The right wing commanded by Hanno, and consisting of the lightest and nimblest galleys, advanced very much ahead of the fleet, to surround those of the enemy, that were opposite to it, and had their heads all facing towards it. The left wing, consisting of the fourth part of the fleet, was drawn up in form of a hornwork, or gibe, and inclined towards the coast. Amilcar, as admiral, commanded the centre, and this left wing. He made use of stratagem to separate the Roman fleet. The latter, who assured themselves of victory over a fleet drawn up with so great an extent, began, by attacking the centre, which had orders to retire by little and little, as if giving way to the enemy, and preparing to fly. The Romans did not fail to pursue them. By which movement the first and second fleet (we have before observed which to distinguish by those names) parted from the third, that had the transports in tow, and the fourth, in which were the *Triarii* designed to support them. When they were at a certain distance, upon a signal given from Amilcar's galley, the Carthaginians fell all at once upon the vessels that pursued them. The Carthaginians had the

¹ Herod. l. viii. c. 84.—96.

advantage of the Romans in the nimbleness of their ships, and the address and facility with which they either advanced or retired: but the vigour of the Romans in the charge, their cranes for grappling the enemy's vessels, the presence of the two consuls, who fought at their head, and in whose sight they were ardent to signalize themselves, inspired them with no less confidence, than the Carthaginians had on their side. Such was the engagement here.

At the same time Hanno, who commanded the right wing, fell in with the ships of the Triarii, and put them into disorder, and confusion. On the other side, the Carthaginians, who were in form of a fork or gibbet, and near shore, drew up in a line, and charged the ships that towed the transports. The latter immediately let go the cords and came to blows with them, so that the whole battle was divided into three parts, which made as many different fights at considerable distances from each other.

As the forces were very nearly equal on both sides, so was the advantage at first. At length the squadron commanded by Amilcar, not being able to resist any longer, was put to flight and Manlius made fast the ships he had taken to his own. Regulus, at the same time, went to the aid of the Triarii and transports, with the vessels of the second fleet, which had not suffered at all. Whilst he engaged Hanno, the Triarii, who had before given way, resumed courage, and returned to the charge with vigour. The Carthaginians, attacked in front and rear, could not resist long, and fled. While this passed Manlius returned, and perceived the third fleet driven close to the shore by the left wing of the Carthaginians. The transports and Triarii being safe, they joined him and Regulus, to make haste and extricate it out of the danger in which they saw it; and it would have been entirely defeated, if the Carthaginians, through fear of being grappled, and thereby reduced to come to blows, had not contented themselves with shutting it in near the shore, without daring to attack it. The consuls coming up at very good time, surrounded the Carthaginians, and took fifty sail of them with their whole complements. Such was the event of this sea fight, in which the Romans were entirely victorious. Twenty-four of their

ships, and above thirty of the Carthaginians perished in it. None of the Roman ships of war fell into the enemy's hands, who lost more than sixty-four.

The Romans never, even in the time of their greatest power, as Polybius observes, fitted out in their own names, and alone, so great a fleet as this we now speak of. Four years before they were absolutely ignorant of what a fleet was; and now they set sail with three hundred and thirty deck-ships.

When we consider the rapidity with which these vessels were built, we are tempted to imagine, that they were of a very small size, and could not contain abundance of hands. We find here the contrary. Polybius tells us a circumstance, which is no where else so clearly explained, and which it is extremely important to know, namely, that each galley carried three hundred rowers, and one hundred and twenty soldiers. How much room must the rigging, provision, water, and other stores of such a galley require! We see in Livy, that they sometimes carried provisions and water for forty-five days, and without doubt sometimes for a longer term.*

The Corvus, or crane, of which mention is often made in sea fights, a machine for grappling ships, shows us, that the ancients found no means so effectual to assure themselves of victory, as to join in close fight, or board the enemy. They often carried balistas and catapultas on board to discharge darts and stones. Though these machines, which served them instead of our cannon, had surprising effects, they only used them, when ships were at a certain distance, and boarded them as soon as possible. It is in this indeed, and only in this, that the valour of troops really appears.

The galleys, of which these two fleets consisted, were of three benches of oars, or at most, of five, except those of the two consuls, which had six. At the battle of Myla, the admiral galley had seven benches of oars. It is easy to judge, that these admiral galleys were not merely for show, and that they must have been of more service in the battle than any of the rest.

* Liv. l. xxix. n. 25.

OF GRAMMARIANS AND PHILOLOGERS.

INTRODUCTION.

WE are at length arrived at the arts and sciences, which relate merely to the mind, and are intended to enrich it with all the branches of knowledge, necessary to instruct man; to give his nobler part all the perfection of which it is capable; to form his understanding and heart and in a word, to enable him to discharge the several functions, to which divine providence shall vouchsafe to call him. For we must not deceive ourselves in this respect: The end of the sciences is neither to become learned solely for ourselves, nor to satisfy a restless and barren curiosity, which draws us on by a seducing pleasure from object to object; but to contribute, each in his way, to the general advantage of society. To confine our labours and studies to our own satisfaction, and to centre every thing in our own self, is to be ignorant that man is the part of a whole, to which he ought to adhere, and of which the beauty consists essentially in the union and harmony of the parts that compose it; all which parts tend, though by different means to the same end,—public utility.

It is in this view God distributes to mankind their different talents and inclinations, which are sometimes so strongly implanted, that it is almost impossible to resist them. Every body knows what an inclination the famous Mr. Paschal had from his earliest infancy for geometry, and what a wonderful progress he made in it by the pure force of his genius, notwithstanding the care taken by his father to hide all the books and instruments from him, which could give him any idea of it. I could quote a great number of the like examples in every art and science. A sequel and effect of these natural inclinations,

which always denote great talents, is the industrious application of the learned to certain studies, often abstract and difficult, and sometimes even disagreeable and tedious, to which, however, they find a secret pleasure attach them with an almost irresistible force. Who can doubt but this pleasure is a kind of attractive charm, which providence annexes to certain severe and painful labours, in order to soften their rigours to these pursuers, and to make them surmount with courage the obstacles, which sooner or later might disgust them, if not passionate after their object, and actuated by a taste superior to all difficulty? But do we not also see, that the design of God, in dispensing the talents and inclinations of men with so astonishing a diversity, has been to enable the learned to be useful to society in general, and to obtain for it all the aids in their power? And what can be more glorious and more grateful to them, if they understand aright their true glory, than to perceive themselves selected from all mankind, to be ministers and co-operators in the cares of the divine providence with regard to man, in that very circumstance, wherein those cares are greatest and most divine; which is in being the guide of the understanding, and the light of the soul.

Should I be suffered, when I behold the infinite variety of the branches of knowledge intended for the instruction of man, from Grammar, which is their base, to those which are more exalted and sublime, if I compared them with the assemblage of the stars dispersed throughout the vast extent of the firmament to dispel the darkness of night? I seem to see in those bodies a wonderful relation with learning and learned men. They have each their allotted sphere, in which they constantly remain. They all shine, but with different splendour, some more, some less, without envying each other. They keep always within the paths assigned them, without ever deviating to the right or left. In fine, and this, in my opinion, is most worthy of attention, they do not shine for themselves,

1 It may be proper to observe here, that of several eminent ancients, whom Rollin introduces under the above head, further notices will be found in succeeding divisions of the work, to which the index at its close will, of course, particularly refer.—Ed.

but for him who made them. *Stella dederunt lumen in custodiis suis, et latata sunt. Vocata sunt, et dixerunt Adsumus; et luxerunt ei cum jucunditate qui fecit illas.* "The stars shined in their watches, and rejoiced: when he calleth them they say, Here we are; and with cheerfulness they showed light unto him that made them." This is our duty and our model.

This book contains what relates to grammarians, philologists, (which term I shall explain in its place) rhetoricians, and sophists. I must premise to the reader, that he will find in his progress here some thorns and difficulties. I have removed many, and have left only such as could not from the nature of the subjects upon which I treat, be excluded.

CHAPTER I.

OF GRAMMARIANS.

GRAMMAR is the art of speaking and writing correctly.

There is nothing more admirable, or more worthy of our attention, than the double gift God has conferred upon us of speech and writing. We make continual use of them, almost without ever reflecting that we do so, and without considering the amazing wonders both the one and the other include.

Speech is one of man's greatest advantages over all other animals. It is one of the greatest proofs of his reason, of which it may be said to be the principal evidence. But by what rare art is it produced, and for how many different parts was it necessary to unite and concur with each other, to form the voice at the first motion of the soul!

I have a thought within me, that I desire to communicate to others, or some doubt, in which I would be satisfied. Nothing is more of the nature of spirit, and consequently more remote from sense, than thought. In what manner therefore shall I be able to transfer it from myself to the persons around me? If I cannot effect this, confined within myself, reduced to me alone, deprived of all commerce, discourse, and consolation, I suffer inexpressible torments: the most numerous assembly, the whole world itself, is to me no more than an hideous solitude. But the divine providence has spared me all these pains, in affixing sounds to my ideas, and in making those sounds subservient to my will, by a natural mechanism never to be sufficiently admired. At the very instant, the exact moment, I would communicate my thoughts to others: my lungs, throat, tongue, palate, teeth, lips, and an infinity of other organs, which depend on,

and are parts of, them, put themselves in motion, and execute my orders with a rapidity, which almost prevents my desires. The air from my lungs, varied and modified an infinity of ways, according to the diversity of my sentiments, issues forth to carry the sound of them into the ears of my auditors, and to inform them of all that passes within me, and of all I desire they should know. To instruct me in producing such wonderful effects, have I had occasion for tutors, lessons, precepts? Nature, that is to say divine providence, has made every thing within me and for me. It has formed in my body all the organs necessary for producing such wonderful effects; and that with a delicacy the senses can hardly trace, and with a variety, multiplicity, distinction, art, and activity, which the naturalists confess above all expression and admiration. This is not all. It has imparted to us an absolute authority over all these organs, in regard to which our mere will is an indispensable command that they never disobey, and that immediately puts them in motion. Why are we not equally docile and submissive to the voice of the Creator?

The manner of forming the voice includes, as I have observed, innumerable wonders. I shall only repeat one circumstance in this place, from which we may judge of the rest. It is extracted from the *Memoirs of the Academy of Sciences*, An. 1700.

In our throat, at the top of the trachean artery, that is, the canal through which the air enters and is respired from the lungs, there is a small oval cleft, capable of being more or less extended, called the *Glotta*. As the opening of this little mouth is very small, in proportion to the largeness of the trachea, the air cannot pass through it from the trachea, without extremely augmenting its velocity, and precipitating its course. Hence, in passing, it violently agitates the small parts of the two lips of the glotta, sets them in motion, and causes them to make vibrations, which produce sound. This sound so formed, goes on to utter itself in the cavity of the mouth and nostrils. This mouth of the trachea forms the different tones or notes, as well as sounds; which it can only do by the different changes of its opening. It is oval, as I said before, and capable of extending or closing itself in certain degrees; and thereby the fibres of the membranes, of which it is composed, become longer in low, and shorter in high, tones. We find by Mr. Dodart's exact calculation of the tones or notes, and half notes of an ordinary voice, that for all the small parts of tone, with which it can raise an octave without straining itself, for the more or less force it can give sound without changing the tone or note, we must necessarily suppose that the little diameter of the *glotta*, which is at most a line, or the

twelfth of an inch, and which changes its length with all these changes, must be, and actually is divided into 9,632 parts; that even these parts are not all equal, and that consequently some are much less than the $\frac{1}{9632}$ part of a line. By what means could the art of man attain to so fine and exquisite divisions! And is it not amazing, that nature itself was capable of executing them? On the other hand, it is no less surprising that the ear, which has so just a sense of tones, perceives, when the voice changes its note ever so little, a difference, of which the organ is no more than the $\frac{1}{9632}$ part of less than a line, or twelfth of an inch.

The ear itself;—can we ever be weary of considering its structure, framed in an admirable manner to collect on all sides, in its anfractuous cavities, the flying impressions and undulations of sound, and to determine them afterwards by a pleasing sensation to the internal organ of hearing? It is for the naturalists to explain these wonders: but it is ours to admire with gratitude their infinite advantages, which we almost every moment enjoy, without reflecting much upon them. What manner of people would a nation of mutes be, who should inhabit the same place, with no power to impart their thoughts to each other, but by signs and gestures, nor to communicate their wants, their doubts, their difficulties, their joy, their sorrow, in a word, all the sentiments of their souls, in which the life of a rational creature properly consists?

Writing is another wonder, which comes very near that of Speech, and which adds a new value to it, from the extent it gives the use to be made of speech, and the permanence or kind of perpetuity speech derives from it. This invention is perfectly well described in the fine verses of Lucan:

Phœniceæ primi, famæ si creditur, ausi
Mansuram rudibus vocem signare figuris.

If fame speak true, and facts believ'd of old,
Phœnicia's sons did first the art unfold
Discourse in uncouth figures to confine,
And sound and sense to image and design.

It is still better expressed in Brebeuf's translation, which improves considerably upon the original:

C'est de lui l que nous vient cet art ingénieux
De peindre in parole, et de parler aux yeux;
Et par les traits divers de figures tracées,
Donner de la couleur et du corps aux pensées.

From him descended first the fine device
To paint the voice, and to discourse the eyes;
In forms and colours sense to clothe he taught,
And all the various features of a thought.

1 Cadmus the Phœnician.

It is this invention, which enables us to correspond and discourse with the absent, and to transfer our thoughts and opinions to them, notwithstanding the remotest distance of places. The tongue, which is the principal instrument and organ of speech, has no share in this equally useful and agreeable commerce.¹ The hand, instructed by us to trace sensible characters upon paper, lends it its aid, makes itself its interpreter, mute as it is, and becomes in its place the vehicle of discourse.

It is to the same invention, as Theophrastus farther observes, whose words I have just quoted, that we are indebted for the inestimable treasure of the writings come down to us, and which has imparted to us the knowledge not only of the arts, sciences, and all past facts; but, what is of infinitely greater value, of the truths and mysteries of religion.

Is it not easy to comprehend how men have been able to compose, out of twenty-five or thirty letters at most, that infinite variety of words, which having no resemblance in themselves to what passes in our minds, do however disclose all the secrets of them to others, and make those, who could not otherwise penetrate our sense, understand all we conceive, and all the different affections of our souls? Let us imagine ourselves in the countries, where the invention of writing has not reached, or where it is not practised: what ignorance! what stupidity! what barbarism do we not see! Can such people be called men? The reader may consult the learned dissertation of Mr. Freret upon the principles of the art of writing; which contains a great deal of very curious knowledge.²

Let us not blush to own it, and let us render due homage of gratitude to him, to whom alone we are indebted for the double advantage of speech and writing. Only God could teach mankind to establish certain figures to signify all sounds or words. And these are the first objects of grammar, which, as I have already said, is the art of speaking and writing correctly. It was infinitely more esteemed, and cultivated with much greater attention, by the Greeks and Romans, than with us, among whom it is fallen into great contempt, and almost generally ne-

2 Ejusdem beneficio absentibus conversamur; et qui multorum diurnum itinere distamus, atque immensis mansionum spatii et intervallis sejungimur, ingeniorum concepta, et animorum sententias nobis invicem per manus transmittimus. Et lingua quidem, quæ primarium orationis organum est, otiosa cessat. Sermoni autem dextra ancillatur, quæ calamo arripito, quod nobis cum amico transigendum erat negotium, papyro aut chartæ inscribit; et sermonis vehiculum est, non or, nec lingua, sed manus; quæ longi temporis usu artem edocuit, et alimenterum compositionem seu structuram probè edocta est. Theod. de Provid. orat. 4.

3 Memoirs of the Academy of Inscriptions, vol. vi.

glected: This difference of sentiments and conduct in this point, arises from these two nations having bestowed considerable time and particular application in the study of their own tongue; whereas we very seldom learn ours by rudiments, which is certainly a great defect in our usual method of instructing youth.

We are surprised to read in Quintilian an exalted praise of grammar, which he says is necessary to youth, agreeable to age, a delightful employment in retirement, and of all studies, that which is attended with more utility than it promises.⁴ This is not the idea we form of it. And indeed it is of far greater extent among the ancients than we give it. It did not confine itself to the laying down of rules for speaking, reading, and writing correctly, which is certainly a very important part of it. The understanding and explication of the poets were one of its branches, and we are not ignorant how many things that study necessarily includes. It added another part, which supposes a great fund of erudition and knowledge: this was *Criticism*. I shall soon show in what this consisted.

That kind of grammarians, called also Philologists, *Philologi*, were not confounded with the Grammatists, *Grammatistæ sive litteratores*, whose sole employment was to teach children the first elements of the Greek or Latin tongues. For which reason the latter did not enjoy the immunities or other privileges granted by the emperors to the grammarians.

I shall relate here in a few words what history tells us concerning those who distinguished themselves most in this way, either amongst the Greeks or Romans. Mr. Capperonier, my brother as fellow of the royal college, who has perfectly studied all that relates to grammar, has been so good to communicate some of his remarks upon that subject to me.

ARTICLE I.

Græcan Grammatici.

I shall not enter into an examination of the origin of the Greek letters. Those who desire to be informed upon that head, may consult the *Memoirs of the Academy of Inscriptions and Belles Lettres*, vol. ii., in which it is treated with great erudition by the late Abbe Renaudot. I adhere to the common opinion of almost all the Greek and Latin authors, who agree, that Cadmus brought the first letters from Phœnicia, and communicated them to the Greeks, that were afterwards called Ionic, of which the origin is sufficiently denoted by their resemblance

to the Hebrew and Phœnician alphabets. I shall confine myself in this place to speaking of those, who distinguished themselves most with regard to the Greek grammar.

PLATO is believed to be the first author in whom any traces of the art of grammar is to be found. And accordingly in his *Philæbus* he shows the method of teaching the knowledge of the letters. In his *Cratylus*, he treats the ancient and famous question, whether the signification of words be natural to them, or arbitrary, and founded solely upon the will of mankind, who has thought fit to annex certain ideas to words? He divides words into two kinds: the primitive, which he ascribes to God; and the derivative, which are of human invention. He insinuates, that the Greek tongue is derived from the Hebrew, which he calls the language of the Barbarians. In the same dialogue, he examines the origin and etymology of several nouns; for which reason Phavorinus says, in *Diogenes Laërtius*, that Plato was the first that observed the propriety and use of grammar.

It seems, however, that ARISTOTLE might be considered as the first author of this science. He has distributed words into certain classes; of which he has examined the different kinds, and particular properties. The twentieth chapter of his *Poetics* begins with this enumeration. "The poetical style or elocution contains these eight parts. The element, the syllable, the conjunction, the noun, the verb, the article, the case or inflexion, the proposition or phrase."

Hermippus,⁵ cited by *Diogenes Laërtius*, tells us, that ERICURUS taught grammar before reading the books of Democritus engaged him in the study of philosophy.

Quintilian⁶ says, that the Stoic philosophers made a great many additions to what Aristotle and Theodectes had introduced concerning grammar. Among these additions he reckons the prepositions, the pronoun, the participle, the adverb, and the interjection. The great etymologist Suidas, Hesychius, Stephanus, Byzantinus, Athenæus, Harpocration, and other *polygraphical philologists*, mentioned several ancient grammarians, of whom some lived after Aristotle, and Alexander the Great, and others in the Augustan age. We shall say something of the most celebrated of them.

PHILETES, of the Island of Cos, may be placed in the first class of these, whom Ptolemy, the first of that name, king of Egypt, made preceptor to his son Ptolemy Philadelphus.

HECATÆUS of Abdera, who composed a treatise upon the poems of Homer and Hesiod.

LYNCÆUS of Samos, the disciple of Theophrastus.

⁴ Necesse est pueris, jucunda senibus, dulcis secretorum comes, et que vel sola omni studiorum genere plus habet operis quam ostentationis. *Quintil.* l. iv. c. 4.

⁵ In Vit. Epic.

⁶ Lib. vi. c. 6.

ZENODOTUS of Ephesus, who first corrected the faults which had crept into the works of Homer.

CALLIMACHUS, uncle on the mother's side to that Callimachus, some of whose poems are still extant. The celebrated ERATOSTHENES, of whom I shall soon speak under the title of Philologer, was one of his disciples.

ARISTOPHANES of Byzantium was the scholar of Eratosthenes, and lived in the time of Ptolemy Philopator. He was in great estimation.

ARISTARCHUS, the disciple of Aristophanes, obscured by his reputation all the grammarians who preceded him, or lived in his own times. He was born in Samothracia, and had for his country by adoption the city of Alexandria. He was highly esteemed by Ptolemy Philometor, who confided the education of his son to his care. He applied himself extremely to criticism, and revised Homer's poems with incredible, but perhaps too magisterial, an exactness. For when a verse did not please him, he treated it as supposititious and interpolated: *Homeri verum negat, quem non probat*.¹ It is said he marked the verses he condemned as supposititious, with the figure of a spit on the side of them; whence came the word *σπίλον*. How great soever the reputation and authority of Aristarchus were, appeals were often made from his decrees, and liberty taken to condemn this great critic's taste, who upon some occasions determined, that such and such verses should be transposed from the Iliad to the Odyssey. Transpositions of this kind are seldom very happy, and generally argue more presumption than judgment. Zenodotus was appointed to revise and examine the criticisms of Aristarchus. In the opinion of some authors, it was this Aristarchus, who divided the two great poems of Homer each into as many books as there are letters in the alphabet, and gave each book the name of a letter. He worked also upon Pindar, Aratus, and other poets. He had many disputations in Pergamus with Crates the grammarian, of whom I shall soon speak.

Cicero calls Atticus his Aristarchus, because, as a good friend and excellent critic, he used to revise and correct his harangues.² Horace also makes use of the same name, to signify an exact and judicious critic.

Vir bonus et prudens versus reprehendet inertes, &c.
Fiet Aristarchus, nec dicet: Cur ego amicum
Offendam in nugis? *In Art Poet.*

Quintilian³ informs us, that these grammarians

critics, not only took upon them to note, with a kind of censorial authority, the verses they did not approve, and to strike out whole books from an author's works, as offspring unjustly ascribed to him, but carried their power so far, as to assign authors their ranks, distinguishing some with peculiar honours, leaving many in the common herd, and entirely degrading others.

What I have said of Aristarchus, shows that criticism, in which the principal merit of the ancient grammarians consisted, was principally intent in discovering the true author of a work, or distinguishing the writings falsely ascribed to him, from such as were really his; and even in those, which were admitted to be genuine, in rejecting the passages, which a different hand had designedly inserted; in fine, to explain what was most beautiful, most solid, and most remarkable in works of wit, and to assign the reasons for their judgment. Now all this required much reading, erudition, taste, and, above all, a just and refined discernment. To know the usefulness of this art, and have a right sense of its value, we need only call to mind certain nations and ages, in which a profound ignorance reigned universally, and for want of critical knowledge, the grossest absurdities, and the most palpable falsifications of all kinds, passed for incontestable truths. It is the glory of our age, and the effect of the best studies, to have entirely dispelled all those clouds and darkness, by the lights of solid and judicious criticism.

CRATES of Mallos, a city of Cilicia, was Aristarchus' cotemporary.⁴ He was sent to Rome in quality of ambassador, by Attalus II. king of Pergamus. He introduced in that great city the study of grammar, which he had always made his principal occupation. He left nine books of corrections upon Homer's poems. After his death there were several other Greek critics at Rome; among the rest the two Tyrannions.

TYRANNION, a famous grammarian in Pompey's time, was of Amisus in the kingdom of Pontus.⁵ He called himself at first Theophrastus: but from his violent behaviour in respect to his companions in study, and perhaps his disciples, he was surnamed Tyrannion. He was the disciple of Dionysius of Thrace, at Rhodes, and fell into the hands of Lucullus, when that general of the Romans had put Mithridates to flight, and possessed himself of part of his dominions. This captivity was no disadvantage to Tyrannion, as it gave him the opportunity of rendering himself illustrious at Rome, and of acquiring considerable riches. He employed them, among other uses, in col-

¹ Cic. Epist. 11. l. iii. ad Famil.

² Id. l. i. Epist. 10. ad Attic.

³ Mistum his omnibus judicium est. Quo quidem ita severè sunt uti veteres Grammatici, ut non versus modò censorio quadam virgula notare, et libros, qui falsè videntur inscripti, tanquam subdititis summoveo familia

permiserint sibi: sed auctores alios in ordinem redegerint, alios omnino exemerint numero. *Quintil.* l. i. c. 4

⁵ Suidas.

lecting a library, according to Suidas, of more than thirty thousand volumes. Charles Stephens, and other authors, say only three thousand; which is more probable. Tyrannion's care in collecting books contributed very usefully to preserving the works of Aristotle. The fate of those works was something singular; as I have related elsewhere. His understanding, and particular industry in this respect, enabled him to do Cicero a very agreeable service, of which he was highly sensible. Every body knows the fondness which persons of study and science have for their books. They are, in a manner, their friends of all hours, their faithful companions; that entertain them agreeably at all times; that sometimes supply them with serious employment, and sometimes with necessary recreation; that go with them into the country, and when they travel; and in times of adversity are almost their sole consolation. Cicero's banishment had torn him from his dear library. It seemed to have been sensible of its master's disgrace; and during his absence, many of his books had been dispersed. One of his first cares, after his return, was to retrieve what remained of them, which he found more abundant than he expected. He commissioned Tyrannion to put them in order, and to dispose them into their several classes, in which he succeeded perfectly well. Cicero, in a letter, wherein he invites his friend Atticus to his house, assures him, that he will be charmed with the fine manner in which Tyrannion had disposed his library. *Perbelle feceris, si ad nos veneris. Offendes designationem mirificam in librorum meorum bibliotheca, quorum reliquie multo meliores sunt quam putaram.*⁶ That dear friend, at his request, had sent him two of his slaves, very expert in what related to books, and in pasting them, called for that reason *glutinatores*. The books of the ancients, as every body knows, were not bound like ours, but were long rolls, consisting of many leaves of parchment or vellum, either tied or pasted together. Tyrannion had set these two slaves to work, who had done wonders; and my library disposed in so fine an order, says Cicero, seems to have given a new soul to my house. *Postea quam Tyrannio mihi libros disposuit, mens addita videtur meis aedibus: qua quidem in re mirifica opera Dionysii et Menophili tui fuit.*⁷

The merit of Tyrannion was not confined to disposing books; he knew how to use them.⁸ When Cæsar was in Africa, making war against Juba, Cicero and Atticus had promised to fix a day for hearing Tyrannion read a book of his composing. Atticus having heard it read without his friend, was reproached by him for it:

"What!" says Cicero to him, "did I several times refuse to hear that book read, because you were absent, and would not you stay to share that pleasure with me? But I forgive you for the admiration you express of it."⁹ What then must a book so agreeable, and at the same time so worthy of being praised, and even admired by such a man as Atticus, have been? It was only remarks upon grammar, upon the different accents, the quantity of syllables, and what is called prosody. Would one believe, that persons of such extraordinary merit could find any pleasure in works of such a kind? They went much farther, and composed tracts of the same nature themselves, as Quinctilian¹⁰ relates of Cæsar and Messala, the first of whom wrote a treatise upon analogy, and the other upon words and letters. Cicero must have had a high value for Tyrannion, as he permitted him to open a grammar school in his house, where he taught this art to some young Romans, and among others, to his brother Quintus's, and no doubt to Cicero's own son.¹¹

TYRANNION, so named from his having been the former's disciple, was otherwise called Diodorus. He was a native of Phœnicia, and was taken prisoner in the war between Anthony and Augustus, and bought by Dymas, one of the emperor's freedmen. He was afterwards given to Terentia, who made him free: she had been Cicero's wife, who repudiated her. Tyrannion opened a school in Rome, and composed sixty-eight books. He wrote one to prove that the Latin was derived from the Greek tongue; and another, which contained a correction of Homer's poems.

DIONYSIUS THE THRACIAN was the disciple of Aristarchus. He taught grammar at Rome in Pompey's time, and composed several books upon that subject, many treatises upon others, and a great number of commentaries upon various authors. Mr. Fabricius has caused one of his grammars to be printed, in the seventh volume of his *Bibliotheca Græca*.

This piece may give us some idea of the method of the ancient Greek grammarians. The author divides his work into six parts. 1. Reading according to the accents. 2. The explanation of the tropes and figures in poetry. 3. The interpretation of the dialects, extraordinary words, and certain historical passages. 4. The etymology of words. 5. The exact knowledge of analogy.¹² 6. The manner of judging poems,

⁹ Ibid. Ep. 6.

¹⁰ Lib. i. c. 4.

¹¹ Quinctus tuus, puer optimus, eruditur egregie. Hoc nunc magis animadverto, quod Tyrannio docet apud me. *Epist.* iv. l. 2. *ad Quinct. frat.*

¹² *Analogy*, according to Vangelas, is a conformity to things already established, which we propose as our model, in making words or phrases like words or phrases already established.

⁶ *Epist.* 4. *Libri* 4. *ad Attic.*

⁷ Ibid. *Epist.* 8.

⁸ *Epist.* 2. l. xii. *ad Attic.* A. M. 3038.

which Dionysius considers as the most refined and most important part of his art. After having explained the three accents, the acute, the grave, and the circumflex; he goes on to treat the different methods of pointing. He even gives, in the course of his work, the definition of the term *Rhapsody*, in the sense of the ancient Homerists, who, holding a small stick of laurel-wood in their hand, sung detached pieces of Homer's poems. Thence he proceeds to the explanation of the letters, which he divides into vowels and consonants, into *Hemiphone* or half-vowels, *aphone* or *cacophone*; that is to say, bad sounding, because he supposes that they have less sound than the others. And lastly, he subdivides the *aphone* into *tenuæ*, *media*, and *aspirata*, without forgetting the *double consonants*, and the *liquids* or *immutables*. After which he treats the long, short, and common syllables. He next explains the *parts of speech*, which he reduces to eight;—the noun, the verb, the participle, the article, the pronoun, the preposition, the adverb, and the conjunction. This author considers the interjection as a kind of adverb. Having explained the six common conjugations called *Barytoni*, he observed, that some grammarians add a seventh, of which the terminations were in *ω* and *ψω*, as *ἀλίσω* and *ἔψω*. The circumflex verbs in *ω*, *έω*, *ίω*; and the four verbs in *μ* are not forgot.

This detail of grammar appears tedious and useless to us; but the ancients had a different opinion of it. There was no part of it, even to the pointing and accents, of which they did not make very great use. They knew that stopping or pointing well gives perspicuity, grace, and harmony to discourse; and that it assists the eyes and minds of readers and hearers, by making the order, series, connexion and distinction of parts more evident; in rendering the pronunciation natural, and in prescribing it just bounds and pauses of different kinds, as the sense requires. It is to the grammarians we have this obligation. The learned, who consult the ancient manuscripts, in which there are neither commas, points, a *linea*, nor any other distinction, experience the confusion and difficulty, that arise from so vicious a manner of writing. This part of grammar is almost generally neglected among us, and often even among the learned: which, however, is a study of no more than half an hour or an hour at the utmost.

I say as much of the accents. The accent is an elevation of the voice upon one of the syllables of a word, after which the voice necessarily falls. This elevation of the voice is called the acute accent, marked thus (´), and the grave accent, or lowering of the voice, thus (`). But because in the Greek and Latin tongues there were certain long syllables, upon which the voice was both raised and depressed, they in-

vented a third accent, which they called the circumflex, at first marked thus (ˆ), and afterwards thus (˘), which comprehended both tones. The grammarians introduced accents in writing, (for they are not of the earliest antiquity) to distinguish the signification of some words otherwise equivocal, to make the cadences more harmonious, to vary the tones, and to direct when to raise or depress the voice. We use them also in the French language, but in a different manner. The *acute* accent is always put over the *é* shut, as *temerité*, &c.; the *grave* accent is put over the *è* open, followed with the letter *s* at the end of words; *procès*, &c. The *circumflex* accent is put over certain long vowels; *dépôt*, *enfant*, *male*, &c.¹

There are a thousand observations of a like nature, to which we lend little or no attention. Among the Greeks and Romans, all children, from their earliest years, learned the rules of grammar exactly, which became natural to them by long use. Hence the meanest of the people at Athens and Rome, knew, to a tittle, the least defect of the orators or actors, in regard to accent or quantity, and were sensibly disgusted at it.

I omit a great number of celebrated grammarians, who afterwards distinguished themselves by their great learning.

JULIUS POLLUX of Naucratis, a city of Egypt, has left us his *Onomasticon*, a work highly esteemed by many of the learned. He lived in the second century, in the reign of the emperor Commodus.

In the interval of time, between the seventh century, and the taking of Constantinople by Mahomet the second, in 1453, we find several learned grammarians, who took abundance of pains to explain the Greek authors, and render them intelligible. Such are among others HESYCHIUS, the author of an excellent dictionary, of great use for understanding the poets: the great etymologist, SUIDAS, who composed a great historical and grammatical dictionary, in which there is abundance of erudition: JOHN TETZES, author of an history in thirteen books, under the name of *Chilades*; and his brother ISAAC, commentator upon Lycophron: EUSTATHIUS, archbishop of Thessalonica, author of a large comment upon Homer, and many others.

ARTICLE II.

Latin Grammarians.

SUETONIUS, in his book of *Illustrious Grammarians*, tells us, that grammar of old was so far from being in honour, that it was not so

¹ Or from being used at first to denote the elision of the letter *s*, when wrote *as* pronounced: all the old French books have *dépôt*, *maître*.

much as in use at Rome, because the ancient Romans valued themselves much more upon being warlike than learned; and that Crates, of Mallos, of whom we have spoken above, was the first that introduced the study of grammar at Rome. Those ancient grammarians, at the same time, taught rhetoric, or at least prepared their scholars for that study, by preliminary exercises. Among the twenty illustrious grammarians mentioned by Suetonius, we find:—

AURELIUS OPILIUS, who at first taught philosophy, afterwards rhetoric, and at last grammar. I have already observed, that this art was of much greater extent than with us.

MARCUS ANTONIUS GNIPHO, who also taught rhetoric in the house of Julius Cæsar, when a child. Cicero, during his prætorship, heard his lectures.

ATTEIUS, surnamed the Philologer. Sallust and Asinius Pollio were his disciples.

VERRIUS FLACCUS, who composed a collection of words of difficult construction, abridged afterwards by Festus Pompeius. He was preceptor to Augustus' grandsons.

CAIUS JULIUS HYGINIUS, Augustus' freedman and library-keeper; to whom a treatise upon mythology, and another upon poetical astronomy, are ascribed.

MARCUS POMPONIUS MARCELLUS, who presumed to criticise upon a speech of Tiberius. And when Attejus Capito endeavoured to justify it, by maintaining, that the word criticised by this grammarian, was Latin, or if it was not, yet being adopted, it would be so; Pomponius made that memorable answer, "You can make men free of the city, Cæsar, but not words."

REMMIUS PALEMÓN of Vicentia, who, in the reigns of the emperors Tiberius and Claudius, having rendered himself famous by his great erudition, and facility in speaking and making verses extemporaneously, disgraced himself as much by his bad morals and arrogance.

Besides the ancient grammarians, whose lives Suetonius has abridged, there were others, whose names do honour to this art, though they did not teach it any other manner than by their writings; as Varro, Cicero, Messala, and Julius Cæsar: for these great personages thought it no dishonour to themselves to treat such subjects.

To avoid prolixity, I omit many learned grammarians, of whom several will recur in the ensuing chapter, where I shall treat of Philologists. Those who may be curious to collect all the Latin authors upon this subject, will find them in the collection of the ancient grammarians, published by Elias Putschius, in 1605, two volumes in quarto. An excellent book, and very necessary to all those who teach the Latin tongue, is the *Minerva* of Sanctius, with the notes of Scoppius and Perizonius.

*Short reflections upon the progress and alteration of Languages.*¹

It is surprising to consider the manner in which languages are formed, augmented, and attain their perfection; and how, after a certain course of years, they degenerate and become corrupted.

God, the sole author of the primitive tongues, (and how could man have invented them?) introduced the use of them to punish and frustrate the foolish undertaking of men, who, before they dispersed themselves into different regions, were for rendering themselves immortal, by erecting the most superb structure, that had ever appeared upon the face of the earth. Till then mankind, who in a manner formed but one family, spoke also but one language. On a sudden, by the most surprising of prodigies, God obliterated from the human mind the ancient traces and remembrances of all the words it knew, and substituted new ones in their stead, which in an instant formed new languages. It is reasonable to suppose, that in dispersing themselves into different countries, each joined himself with those whose language he understood, as they did his.

I shall confine myself to the sons of Javan, (in the Hebrew *Javan* is the same as *Ion*) from whom descended the Ionians, or Greeks. Behold then, the Greek language established amongst them, entirely different from the Hebrew, (I say this in the supposition, that the Hebrew was the language of the first man,) different, not only in respect of words, but the manner of declining nouns and conjugating verbs, inflexions, turns, phrases, number, and sound or cadence. For it is remarkable that God has given each language a peculiar genius and character, which distinguishes it from all others, and of which the effect is sensible, though the reason of it be almost infinite and inexhaustible. To the multitude of Greek words, with which their memory was furnished in these first times, use, necessity, invention, the exercise of arts, and perhaps even convenience and embellishment, occasioned the addition of new ones. The Greek radices (roots or radical words) are computed to be two thousand one hundred and fifty-six.² The derivative or compound words very much augment that number, and are multiplied to infinity: no language is so copious and abundant as the Greek.

Hitherto we have in a manner only seen the matter of the Greek language, or the words of

² See the Preliminary Dissertation at the commencement of this Volume.—*Ed.*

³ Raa. Græc. ac Port Royal.

which it is composed, that were almost solely the gift of the Creator and necessity. The use, connexion, and disposition of these words, had occasion for the aids of art. It is observed, that among those who used this language, some spoke better than others, and expressed their thoughts in a clearer, more compact, emphatical, and agreeable manner. These were taken for models, were studied with care, and had observations made upon their discourses, both in writing, and by word of mouth. And this gave birth to what we call grammar, which is no more than a collection of observations upon language: a very important, or rather absolutely necessary work, for fixing the rules of a tongue, reducing them to a method that facilitates the study of them, clearing up their doubts and difficulties, explaining and removing bad uses and modes of speech, and conducting by sensible and judicious reflections, to all the beauty of which it is susceptible.

We know nothing of the beginnings nor progress of the Greek tongue. The poems of Homer are the most ancient work we have in that language; and the elocution of them is so perfect, that no future age has been capable of adding any thing to it. This perfection of language subsisted and preserved itself longer among the Greeks than any other nation of the world. Theocritus lived above six hundred years after Homer. All the poets who flourished during that long interval, except a very small number, are esteemed excellent with regard to language, in their several ways. The same may be almost said of the orators, historians, and philosophers. The universal and prevailing taste of the Greeks for arts, the esteem they always had for eloquence, their care in cultivating their language, which was the only one they learned, disdaining generally the Roman, though spoke by their masters; all this conspired to support the Greek tongue in its purity during many ages, till the translation of the empire to Constantinople. The mixture of Latin, and the decline of the empire, which induced the decay of the arts, soon after occasioned a sensible alteration in the Greek language.

The Romans, solely intent upon establishing and securing their conquests by means of arms, had little regard at first to the embellishment and improvement of their tongue. The small remains, which we have of the annals of the pontiffs, the laws of the twelve tables, and some other monuments, few in number, show how gross and imperfect it was in these early times. It afterwards, by little and little, grew more copious, and enlarged itself insensibly. It borrowed a great number of words from the Greek, which it dressed after its own mode, and in a manner naturalized; an advantage the

Greeks had not. We may perceive at this day the taste of the Greek language in the old Latin poets, such as Pacuvius, Ennius, and Plautus, especially in the compound words with which they abound. What we have of the discourses of Cato, the Græchi, and the other orators of their times, shows a language already of great copiousness and energy, and that wanted nothing but beauty, disposition, and harmony.

The more frequent communication Rome had with Greece, after having conquered it, introduced an entire change in it with respect to language, as well as taste for eloquence and poetry, two things which seem inseparable. To compare Plautus with Terence, and Lucretius with Virgil, one would be apt to believe them many ages remote from each other, although they were divided only by some few years. The epocha of reviving, or rather establishing pure Latinity at Rome, may be fixed at Terence, and continued to the death of Augustus; something more than an hundred and fifty years. This was the happy age of Rome with regard to polite learning and arts, or as it is called the golden (and Augustan) age, in which a crowd of authors of the highest merit carried the purity and elegance of diction to their utmost height, by writings entirely different as to style and matter, but all equally distinguished by pure Latinity and elevation of taste. This rapid progress of the Latin tongue will be less surprising, if we remember that such persons as Scipio Africanus the younger, and Lælius on the one side, and Cicero and Cesar on the other, did not disdain, in the midst of their important occupations, the former to lend their hands and pens to a comic poet, and the latter to compose treatises themselves upon grammar. This purity of language continually declined from the death of Augustus, as well as the taste for sound eloquence; for their fate is almost always the same. There needs no great discernment to perceive a sensible difference between the authors of the Augustan age and those who succeeded it. But two hundred years after, the difference is excessive, as we may easily observe in reading the authors, who have written the history of Augustus. The purity of language was preserved almost solely (and that too not without some alteration) among the civilians Ulpian, Papinian, Paulus, &c.

I do not know whether it were just to say, the fate of language and that of taste were always the same. We have old French authors, as Marot, Amyot, Montaigne, and others, the reading of whom still pleases infinitely, and, no doubt will for ever please. What is it we love and esteem in these authors? Not their language, because in these days we could not suffer any thing like it. It is something more easily conceived than expressed: a simple and genuine air,

a fine turn of imagination, natural manners, a nobleness and majesty of style without affectation or bombast, and especially the sentiments of nature, which flow from and reach the heart: in a word, it is that taste of ancient Greece and Rome, which is of all ages and nations, and diffuses through writings a certain salt, the spirit and delicacy of which every reader of genius perceives, whilst it adds a new value to the force and solidity of the matter with which it is united. But why does not this old language please still? Our language is deficient in many words, and these old authors have excellent ones; some clear, simple, and natural; and others full of force and energy. I always wished, that some able hand would make a small collection of such as we want, and might regain, to show us our error in neglecting the progress and improvement of our language as we do, and to rebuke our stupid indolence in this point. For if the French tongue, otherwise rich and opulent, experiences on certain occasions a kind of barrenness and poverty, it is to our own false delicacy we should impute it. Why should we not enrich it with new and excellent terms, which our own ancient authors, or even the neighbouring nations might supply, as we see the English actually do with great success? I am sensible that we should be very discreet and reserved in this point: but we ought not to carry our discretion to a narrow pusillanimity.

We have reason to believe, that our language has attained the highest perfection of which it is capable; and of this, the honour of its being adopted into almost all the courts of Europe, seems a glorious proof. If it be defective in any thing, it is, in my opinion, only with regard to a richer abundance; notwithstanding good speakers scarce perceive that it wants any words for the expression of thoughts; but it would admit a greater number. France had in the last age, and still has, writers of distinguished merit, highly capable of acquiring her this new advantage. But they respect and fear the public. They make it, with reason, a duty to conform to, and not to clash with its taste. Hence, to avoid incurring its displeasure, they hardly dare venture any new expression, and leave the language in this point where they found it. It would therefore be incumbent on the public, for the honour of the language and nation, to be less delicate and severe; and also on authors, to become a little less timorous; but, I repeat it, great discretion and reserve are always necessary in using this liberty.

But I do not perceive, that while I venture my reflections upon our language in this manner, I myself perhaps may seem wanting in respect for the public; which would be very contrary to my intention. I conclude this arti-

cle with taking the liberty to acquaint the reader again, that this study is of great importance, and should by no means be neglected. It is with joy I see the French grammar regularly taught in several classes of the university.

CHAP. II.

OF PHILOLOGERS.

Those who have applied their studies in examining, correcting, explaining, and publishing the ancient authors, are called *Philologists*: they profess universal learning, including all sciences and authors, in which anciently the principal and most noble part of the grammarian's art consisted. By philology therefore is understood a species of science containing grammar, rhetoric, poetry, antiquities, history, philosophy, and sometimes even mathematics, physic, and civil law; without treating any of these subjects either in whole or in part, but occasionally using all or any of them. I do not know for what reason this philology, which has done so much honour to the Scaligers, Salmasiuses, Casaubons, Vossiuses, Sirmondiuses, Gronoviuses &c. and which is still so much cultivated in England, Germany, and Italy, is almost despised in France, where we set no value upon any thing besides exact and perfect sciences, such as physics, geometry, &c. Our academy of Belles Lettres, which, under that name, includes all kinds of erudition ancient and modern, and publishes every year in its memoirs, treatises upon all manner of subjects, may contribute very much to revive and augment this taste for philology among us. I shall here give a brief account of some of those who distinguished themselves most in this kind of literature, mingling Greeks and Romans together.

ERATOSTHENES.

Suetonius says, that Eratosthenes was the first who was called *Philologer*.¹ He was a native of Cyrene, and became library-keeper of Alexandria. He lived in the time of Ptolemaeus Philadelphus, and had applied himself to all kinds of science, without thoroughly cultivating any one, as those do, who make one their sole study in order to excel in it.² This occasioned his being nicknamed *Beta*,³ because, though not capable of aspiring to the first rank in any science, he had at least attained the second in all in general. He lived fourscore years, and starved himself to death, not being able to survive the loss of sight with which he was afflicted. I shall have occasion to speak of him again elsewhere. Aristophanes of Byzantium, master of the famous critic Aristarchus, was his disciple.

1 De Illust. Grammat. c. x. Olymp. 146. Ant. J. C. 200.

2 Suidas.

3 The second letter of the Greek alphabet.

VARRO.

Varro (*Marc. Terentius*) was esteemed the most learned of all the Romans. He was born in the 636th year of Rome and died in the 726th at the age of ninety. He assures us himself, that he had composed almost five hundred volumes upon different subjects, of which he dedicated that upon the Latin tongue to Cicero.¹

¹ The importance attached to such dedications by the great men of Rome, and the value, in particular, placed by Cicero on a compliment of this nature from Varro, may be seen from a letter of the orator to Atticus. "You know," says he, "that till lately I composed nothing but orations, or some such works, into which I could not introduce Varro's name with propriety. Afterwards, when I engaged in a work of more general erudition, Varro informed me, that his intention was, to address to me a work of considerable extent and importance. Two years, however, have passed away without his making any progress. Meanwhile I have been making preparations for returning him the compliment." The *Academica* were dedicated to Varro before he fulfilled his promise of addressing a work to Cicero; and it appears, from Cicero's letter to Varro, sent along with the *Academica*, how impatiently he expected its performance, and how much he importuned him for its execution. "To exact the fulfilment of a promise," says he, "is a sort of ill manners, of which the populace themselves are seldom guilty. I cannot, however, forbear—I will not say, to demand, but remind you, of a favour which you long since gave me reason to expect. To this end, I have sent you four admonitors (the four books of the *Academica*), whom, perhaps, you will not consider as extremely modest." It is curious, that when Varro did at length come forth with his dedication, although he had been highly praised in the *Academica*, he introduced not a single word of compliment to Cicero.

The fragments remaining of Varro's great work, *De Lingua Latina*, commence at the fourth book, which, with the two succeeding books, is occupied with the origin of Latin terms, and the poetical licenses that have been taken in their use. In general, the Romans, like the Greeks, were unfortunate in their etymologies, being inadequately informed of every thing that did not relate to their own country. Varro's work is faulty in two particulars; the first arising from his having recourse to far-fetched allusions and metaphors in his own language, to illustrate his etymology of words, instead of going at once to the Greek; and the second proceeding from his ignorance of the eastern and northern languages. The second division of his work, which extended from the commencement of the seventh to the end of the twelfth book, comprehended the accidents of words, and the different changes which they undergo from declension, conjugation, and comparison. The third part of the work, which contained twelve books, treated of syntax, or the junction of words, so as to form a phrase or sentence. It also contained a sort of glossary, which explained the true meaning of Latin vocables.

It is not certain whether the *Libri de Similitudine Ferborum* and those *De Utilitate Sermonis*, cited by Priscian and Charisius as philological works of Varro, were parts of his work *De Lingua Latina* or separate

• Epist. ad Attic. lib. xiii. Ep. 12.

† Epist. Famil. lib. ix. Ep. 8.

He wrote a treatise upon rural life, *De re rustica*, which is very much esteemed.² Both these pieces are come down to us. St. Austin admires and extols in many places the vast erudition of this learned Roman. He has preserved the plan of Varro's great work upon the Roman antiquities, consisting of forty-one books. It is of this work Cicero speaks, addressing himself to Varro: "We were before," says he, "in a manner strangers, that did not know our way in our own city. Your books have as it were set us right, and informed us who, and where, we are."³ After the enumeration Cicero makes of them, St. Augustine cries out with admiration: "Varro read so great a number of books, that it is wonderful he could find time to compose any himself, and yet he composed so many, that one can hardly conceive how one man could read them all."⁴ It was difficult to write so many works in an elegant and polite style. And the same St. Austin observes, that Cicero praises Varro as a man of penetrating wit and profound learning, not as one of great eloquence and refinement of diction.⁵

ASCONIUS PEDIANUS.

Asconius Pedianus, cited by Pliny the naturalist, and by Quintilian, lived in the reigns of Nero and Vespasian. We have a fragment of his notes or comments upon several of Cicero's orations. He may be said to have been the model of most of the Latin critics and scholiasts who succeeded him, and of such as applied themselves after him to explaining authors.

PLINY THE ELDER.

Pliny (*C. Plinius secundus*) called the elder, might be ranked amongst the historians, or

compositions. There was a distinct treatise, however, *De Sermonis Latino*, addressed to Marcellus, of which a very few fragments are preserved by Aulus Gellius. The critical works of Varro were entitled, *De Proprietate Scriptorum—De Poetis—De Poematis—Theatralia, sive de Actionibus Scenicis—De Scenicis Originibus—De Plautinis Comediis—De Plautinis Questionibus—De Compositione Satirarum—Rhetoricorum Libri*. These works are mentioned by Gellius, Nonius Marcellus, and Diomedes; but almost nothing is known of their contents.—Ed.

² See the Appendix to the article Agriculture.—Ed.

³ Nos, inquit, in nostra urbe peregrinantes errantesque, tanquam hospites, tui libri quasi domum reducerunt, ut possemus aliquando quieti ubi essemus cognoscere. *Acad. Quest. l. i. n. 9.*

⁴ Varro tam multa legit, ut aliquid ei scribere vacasse miremur; tam multa vix quoniam legere potuisse credamus. *De Civit. Dei, l. vi. c. 2.*

⁵ Cum Marco Varro, homine, inquit, omnium, facile acutissimo, et seire ullâ dubitatione doctissimo. Non ait, eloquentissimo vel facetissimo; quoniam re vera in hac facultate multum impar est. *August. ibid.*

rather amongst the philosophers, who have treated physics. But the multiplicity of the subjects he speaks of in his books of natural history, made me conceive I might rank him among the philologists.

Pliny was born at Verona, and lived in the first century, under Vespasian and Titus, who honoured him with their esteem, and employed him in different affairs. He served in the armies with distinction, was admitted into the college of augurs, was sent governor into Spain; and notwithstanding the time spent in his employments, he found enough for application to a great number of works, which unfortunately are lost, except his *natural history* in thirty-seven books: a work, says Pliny the younger, of infinite extent and erudition, and almost as various as nature itself: Stars, planets; hail, winds, rain; trees, plants, flowers; metals, minerals; animals of every kind, terrestrial, aquatic, volatile; geographical descriptions of countries and cities; he takes in all, and leaves nothing in nature or art without an industrious examination.⁶ To compose this work, he perused almost two thousand volumes. He takes care to inform the reader, that he took the time for this work not out of that, which the public affairs he was charged with required, but from his hours of rest, and such only as would otherwise have been lost.⁷ Pliny the younger, his nephew, tells us, that he led a simple and frugal life, slept little, and made the most of his time, at his meals, making somebody read to him; and in travelling, having always his book, tablets, and copyist by his side: for he read nothing without making extracts from it.⁸ He conceived, that managing his time in this manner, was adding to the length of his life, the duration of which is much abridged by sleep. *Pluribus horis vivimus: profecto enim vita vigilia est.*⁹

Pliny was far from having the low vanity of some authors, who are not ashamed to copy others without quoting them. "Probity and honour, in my opinion," says he, "require, that we should pay a kind of homage to those, whose learning and knowledge are useful to us, by a sincere and ingenuous confession of it."¹⁰ He compares an author, who makes his advantage of another's labours without owning it, to a person

who borrows money and pays usury for it: with this difference, however, that the debtor, by the interest he pays, does not discharge the principal sum lent him; whereas an author, by the frank confession of what he borrows, gains it in some measure, and makes it his own. From whence he concludes, that it is meanness of spirit and baseness, to be better pleased with being shamefully detected in theft, than ingenuously to confess a debt. I have made myself very rich in the latter way, and at no great expense. He perfectly understood all the difficulty and inconveniences of an undertaking like his, in which the subject he treats is of its own nature, barren and tedious, without leaving any room for a writer to display his genius. But he was convinced, that the public are not a little obliged to authors, who prefer being useful to being pleasing; and who, from that view, have the courage to surmount and undergo all the pains of a tedious and disagreeable labour.¹¹ He flatters himself, that he shall be pardoned for all the faults he may commit; which are indeed very numerous, as they were inevitable in a work of so vast an extent, and so prodigious a variety.

Pliny dedicated his work to Titus, at that time almost associated in the empire by Vespasian his father, and who afterwards became the delight of mankind. He gives him a short, but very exalted praise, in telling him: "Your exaltation has made no other change in you, but that of enabling you to do all the good you desire, by making your power equal to the benevolence of your heart:" *Nec quicquam in te mutavit fortunæ amplitudo, nisi ut prodesse tantundem posses et velles.*¹²

Pliny the younger tells us, in a letter, which he addresses to Tacitus the historian, the sad accident that occasioned his uncle's death. He was at Misenum, where he commanded the fleet. Being informed that a cloud appeared of extraordinary magnitude and form, he put to sea, and soon discovered that it came from mount Vesuvius. He made all the haste he could to get to a place from which every one else fled, and to that part of it where the danger seemed greatest, but with such a freedom of spirit and unconcern, that he made and dictated observations upon every extraordinary appearance that arose. His ships were already covered with ashes, which fell the thicker and hotter, the nearer they approached the mountain. Already calcined stones and flints all black, burned and pulverized by the violence of the fire, poured down around them. Pliny deliberated some time

6 Opus diffusum, eruditum, nec minus varium quam ipsa natura. *Plin. Epist. v. l. 3.*

7 Succisivis temporibus ista curamus, id est nocturnis. *Præf.*

8 Ep. v. l. 3. 9 In *Præfat.*

10 In his voluminibus auctorum nomina prætexui. Est enim benignum, ut arbitror, et plenum ingenui pudoris, fateri per quos profeceris.—Obnoxii profecto animi, et infelicis ingenii est, deprehendi in furto malle, quam mutuum reddere, cum præsertim sors fiat ex usura. In *Præfat.*

11 Equidem ita sentio, peculiarem lin studiis causam eorum esse, qui difficultatibus victis, utilitatem juvandi præterunt gratiæ placendi. *Ibid.*

12 *Epist. xvi. l. 6.*

whether or not he should return back: but having re-assured himself, he went forward, landed at Stabie, and went to the house of his friend Pomponianus, whom he found in the greatest terror, and endeavoured to encourage. After supper he went to bed, and slept soundly, till the approach of danger obliged them to wake him. The houses were shaken in such a manner by repeated earthquakes, that one would have thought they had been torn from their foundations. The family went into the fields. I omit a number of circumstances. The dark and frightful night, that hung over all, had no other light than what it received from the fire of the mountain. Flames that appeared of an unusual vastness, and the smell of sulphur, which foretold their approach, made every one betake himself to flight. Pliny rose, by the help of two servants, and that very moment fell down dead, apparently suffocated by the thickness of the smoke. This was the end of the learned Pliny. We cannot but be pleased with a nephew, for having drawn so well the death of his uncle, and for having seen nothing in it but fortitude, courage, intrepidity, and greatness of soul. But to judge of it rightly, can we acquit an enterprise of rashness, in which a man hazards his life, and what is more to be condemned, that of others, only to satisfy his curiosity?

It remains for me to conclude this article with a word or two upon Pliny's style, which is peculiar to him, and like that of no other writer. We must not expect to find in it either the purity, elegance, or admirable simplicity of the Augustan age, from which however it was not removed very many years. His proper character is force, energy, vivacity, and I might say, even boldness, as well in his expressions as thoughts, with a wonderful fertility of imagination, to paint and make the objects he describes sensible. But it must also be owned, that his style is stiff and confined, and thereby often obscure; and that his thoughts frequently swell beyond truth, and are strained, and even false. I shall endeavour to show this by some examples. Pliny¹ explains the wonders contained in the matter of which sails for ships are made, namely, flax and hemp.² Man sows only a small seed in the ground, which suffices to make him master of the winds, and to subject them to his occasions. Without mentioning an infinite number of uses made of flax and hemp, what can be more wonderful, than to see an herb make Egypt and Italy approach each other, notwithstanding the sea that separates them? And what herb is this? A small, slender, weak blade, that scarce raises itself above the ground, that of itself forms neither a firm body nor substance,

and requires to be prepared for our uses, by being broken and reduced to the softness of wool. Yet little as this plant is, we are indebted to it for the facility of transporting ourselves from one end of the world to the other. *Seritur linum.* Sed in qua non occurrit vita parte? quodve miraculum majus, herbam esse que admoveat *Aegyptum Italiae*.—Denique tam parvo semine nasci, quod orbem terrarum ultra citroque portet, tam gracili avena, tam non alte a terra tolli; neque id viribus suis necti, sed factum, tusumque, et in mollietiem lana coactum! He gives a magnificent idea of the grandeur and majesty of the Roman empire.³ Rome, says he, is the mother at the same time and nurse of the universe; chosen expressly by the gods to render heaven itself more illustrious, to unite all the empires dispersed over the whole earth, to refine and soften manners and customs, to reduce to one and the same language the barbarous and discordant tongues of so many nations, to establish among them by that means an easy and salutary commerce, to communicate to man the laws of humanity; in a word, to make that city the common country of all the people of the universe. *Terra (Italia) omnium terrarum alumna, eadem et parens; numine deum electa, quæ eælum ipsam clarior faceret, sparsa congregaret imperia, ritusque molliret, et tot populorum discordes ferasque linguas sermonis commercio contraheret ad colloquia, et humanitatem homini daret; breviterque una cunctarum gentium in toto orbe patria fieret.* I shall only add one more passage in this place, which seemed very remarkable to me, and relates to all of us. It is with reason, says Pliny,⁴ that we give man the first rank among all creatures, him for whom nature seems to have formed all others: but she makes him pay dear for all her presents; so that we do not know whether we have most room to consider her in regard to him as an indulgent parent, or a rigid stepmother. All other animals come into the world, each in a different dress to cover it; man is the only one that stands in need of a foreign aid to clothe him. He is thrown at his birth stark naked upon the ground, as naked as himself. The first signs of life that he gives are cries, laments, and tears, which is not the case with any of the other animals.⁵ To

³ Lib. iii. c. 5.

⁴ Lib. vii. in Proem.

⁵ The Latin tongue has a peculiar word to express the cries of infants, *ugitus*; as it also has for that of oxen, cows, and bulls, *magitus*; and that of lions, *rugitus*. Our language has adopted the two last words, *magisment*, *rugisment*. I know not why it should not do the same in regard to the first, and use *ugisment*, which is in the same mode of analogy. This word might offend at first through its novelty; but we should insensibly accustom ourselves to it as well as to the others. For my part, not having sufficient authority with the public, I dared not venture it, and contented myself, with some regret, to say only to myself:—

¹ Lib. 19. in Proem.

² Pliny mentions only flax.

LUCIAN.

this first use which he makes of the light, succeed the folds and bandages in which all his members are wrapt and bound up, a thing no less particular to him. It is in this condition the king of animals, over whom he is destined to reign, finds himself, as soon as born, tied hand and foot, and venting sobs and shrieks. His life begins with torments and inflictions for the sole crime of being born. How strange is the folly of mankind to imagine themselves, after such beginnings, born for pride and pomp! *Principium jure tribuetur homini, cujus causa videtur cuncta alia genuisse natura, magna seve mercede contra tanta sua munera; non sit ut satis aestimare, parens melior homini, an tristior noverca fuerit. Ante omnia, unum animantium cunctorum alienis velat opibus: ceteris variis tegumenta tribuit.——Hominem tantum nudum, et in nuda humo, natali die abjicit ad vagitus statim et ploratum, nullumque tot animalium aliud ad lacrymas, et has protinus vite principio.——Ab hoc lucis rudimento, quae non feras quidem inter nos genitas, vincula exeiipiunt, et omnium membrorum nexum. Itaque feliciter natus jacet, manibus pedibusque devinctis, fletus animal ceteris imperaturum; et a suppliciis vitam auspiciatur unam tantum ob culpam, quia natus est. Heu! dementia ab his initiis existimantium ad superbiam se genitos!* The pagans had a right sense of man's misery from his birth, but did not know the cause of it, as St. Augustin observes, speaking of Cicero: *Rem vidit, causam non vidit.*

These few passages which I have here quoted from Pliny, and have translated as well as I could, without being able to render the energy of the original, may suffice to give the reader some idea of his style and character. I should observe, before I conclude, upon the industrious art of the author I now speak of. His work, which takes in all natural history, and treats circumstantially an infinity of subjects, absolutely necessary to his plan, but entirely disagreeable in themselves, abounds almost everywhere with thorns and brambles, which present nothing grateful to the reader, and are very capable of giving him disgust. Pliny, like an able writer, to prevent, or at least to lessen, this distaste, has taken care to intersperse here and there some flowers, to throw into some of his narratives grace and spirit, and to adorn almost all the prefaces, which he places in the front of each of his books, with fine and solid reflections.

——Ego cur acquirere pauca,
Si possum, invidetur?——

Horat.

The Translator thought proper to retain this note, because it is an example of what the author has said above in the text, upon introducing new words into a language, and may serve for ours as well as the French.

Lucian, a Greek author, was born at Samosata, the capital of Comagena, a province of Syria, of parents of very moderate condition. His father, not having any fortune to give him, resolved to make him learn a trade. But the beginnings not being very much in his favour, he applied himself to literature, upon a dream, true or fictitious, related in the beginning of his works. I shall give an extract of it in this place, which may contribute to give the reader an idea of his genius and style.

I was fifteen years old, says he, when I left off going to school, at which time my father consulted with his friends how to dispose of me. Several did not approve my being brought up to letters, because much time and expense were necessary for success in them. They considered that I was not rich, and that in learning a trade I should soon be able to supply myself with the means of life, without being a charge to my father or family. This advice was followed, and I was put into the hands of an uncle, who was an excellent sculptor. I did not dislike this art, because I had amused myself very early in making little works of wax, in which I succeeded tolerably well; besides, sculpture did not seem so much a trade to me, as an elegant diversion. I was therefore set to work, to try how I should take to it. But I began by laying on the chisel so clumsily upon the stone, which had been given me to work upon, and was very fine, that it broke under the weight of my fists. My uncle was so violently angry, that he could not help giving me several blows: so that my apprenticeship began with tears. I ran home crying bitterly, and related this unfortunate adventure, showing the marks of the blows I had received, which exceedingly afflicted my mother. In the evening I went to bed, and did nothing but ruminate upon what had happened all night. In my sleep I had a dream, which made a very lively impression upon me. I thought I saw two women. The one was rough and uncombed, with dirty hands, sleeves tucked up, and her face all covered with sweat and dust, in short, such as my uncle was when at work. The other had a graceful air, a sweet and smiling aspect, and was very neat, though modest, in her attire. After having eagerly pulled me to and fro to make me join one of them, they referred the decision of their difference to my own choice, and pleaded their cause alternately. The first began thus:—"Son, I am Sculpture, whom you have lately espoused, and whom you have known from your infancy, your uncle having made himself very famous by me. If you will follow me, without hearkening to the soothing words of my rival, I will

render you illustrious, not like her, by words, but deeds. For besides, that you will become strong and vigorous like me, you shall acquire an estimation not subject to envy, nor one day the cause of your ruin, like the charms of her who now endeavours to seduce you. For the rest, be not in pain upon account of my habit ; it is that of Phidias and Polyclethus, and those other great sculptors, who, when alive, were adored for their works, and who are still adored with the gods that they made. Consider how much praise and glory you will acquire by treading in their steps, and what joy you will give your father and family." This is very near what this lady said to me in a rude gross tone, as artisans speak, but with force and vivacity. After which, the other addressed herself to me in these words :—" I am Erudition, who preside over all the branches of polite knowledge. Sculpture has displayed the advantages you would have with her. But if you hearken to her, you will always continue a miserable artificer, exposed to the contempt and insults of the world, and compelled to make your court to the great for subsistence. Should you even become the most excellent in your art, you will only be admired, whilst none will envy your condition. But if you follow me, I will teach you whatever is most noble and most excellent in the universe, and whatever antiquity boasts of remarkable. I will adorn thy soul with the most exalted virtues, such as modesty, justice, piety, humanity, equity, prudence, patience, and the love of whatever is virtuous and laudable : for these are the real ornaments of the soul. Instead of that mean dress of yours, I will bestow upon thee a majestic one, like that thou seest me wear ; and from poor and unknown, I will render thee illustrious and opulent, worthy of the highest employments, and capable of attaining them. If thou desirest to travel into foreign countries, I will cause thy renown to go before thee. People will come from all parts to consult thee as an oracle : the whole world will do homage to and adore thee. I will even give thee the so much boasted immortality, and make thee survive for ever in the remembrance of men. Consider what *Æschines* and *Demos*-*thènes*, the admiration of all ages, became by my means. *Socrates*, who at first followed Sculpture my rival, no sooner knew me, than he abandoned her for me. Has he had cause to repent his choice ? Will you renounce such honours, riches, and authority, to follow a poor unknown, who has nothing to give thee, but the mallet and chisel, the low instruments she holds in her hands, who is reduced to get the means of life by the sweat of her brows, and to be more intent on polishing a piece of stone, than in polishing herself ?" She had no sooner spoken these words, than, struck with her pro-

mises, and not having yet forgot the blows I had received, I ran to embrace her almost before she ceased to speak. The other, transported with rage and indignation, was immediately changed into a statue, as is related of *Niobe*. Erudition thereupon, to reward my choice, made me ascend with her into her chariot, and touching her winged horses, she carried me from east to west, making me scatter universally, something I know not what, of celestial and divine, that caused mankind to look up with astonishment, and to load me with blessings and praises. She afterwards brought me back into my own country, crowned with honour and glory ; and restoring me to my father, who expected me with great impatience : " Behold," said she to him, pointing to the robe I had on, " of how exalted a fortune you would have deprived your son, had I not interposed." Here ended my dream.

Lucian concludes this short discourse with observing that his design, in relating this dream, which seems entirely a fiction of his own, was to inculcate the love of virtue in youth, and to encourage them by his example to surmount all the difficulties they may meet with in their course, and to consider poverty as no obstacle to real merit.

The effect this dream had, was to kindle in him an ardent desire to distinguish himself by the study of polite learning, to which he entirely devoted himself. We may judge of the progress he made in it, by the erudition that appears in his writings upon all manner of subjects ; which gave me reason to place him amongst the philologers. He says himself, that he embraced the profession of an advocate : but that abhorring the clamour and chicanery of the bar, he had recourse to philosophy as to an asylum. It appears also from his writings that he was a rhetorician, who professed eloquence, and composed declamations and harangues upon different subjects, and even pleadings, though none of his making have come down to us.

He settled first at Antioch ; whence he went into *Ionis* and *Greece*, and afterwards into *Gaul* and *Italy* : but his longest residence was at *Athens*. In his extreme old age, he accepted the office of register to the prefect of *Egypt*. I shall not enter into a circumstantial account of the particulars of his life, which are of little importance to my subject. He lived to the reign of *Commodus*, to whom he inscribed the history of *Alexander the Impostor*, after the death of *Marcus Aurelius*.

He left a variety of writings upon different subjects. The purity of the Greek tongue, and the clear, agreeable, lively, and animated style, in which they are written, give the reader great pleasure. In his dialogues of the dead, he has hit that admirable simplicity, and natural plea-

santry of humour, which are so well adapted to a manner of writing, which is extremely difficult, though it does not seem so, because a vast number of personages, very different in their age and condition, are introduced speaking in it, each according to their peculiar character. His writings have this advantage, as Quintilian has observed of Cicero's, that they may be useful to beginners, and no less so to the more advanced. He is wonderful in his narration, and has a fecundity in him, which may be of great service to geniuses naturally dry and barren. He treats fable in a manner at once agreeable and very proper to impress it upon the memory, which is of no small advantage for the understanding of the poets. He paints admirably in a thousand places the miseries of this life, the vanity of mankind, the pride of the philosophers, and the arrogance of the learned. It is however true, that choice and discernment are necessary in reading this author, who, in many of his works, shows little respect for modesty, and makes open profession of impiety, equally deriding the christian religion, of which he speaks in many places with extreme contempt, and the pagan superstitions, of which he shows the ridicule. This occasioned his being called blasphemous and atheist. And indeed he followed the Epicurean philosophy, which differs little from atheism; or rather he had neither religion, nor any fixed and constant principles, regarding every thing as uncertain and problematical, and making every thing matter of jest. Suidas says, it was generally believed that he was torn in pieces by dogs, as a judgment for his presumption in making Christ the subject of his raillery. It were to be wished that this fact was better attested.

AULUS GELLIUS.

Aulus Gellius (or by corruption Agellius) was a grammarian, who lived in the second century, in the reigns of Marcus Aurelius, and some other emperors his successors. He studied grammar at Rome, and philosophy at Athens, under Calvisius Taurus, whence he afterwards returned to Rome.

He rendered himself famous by his *Noctes Atticæ*, which name he gave to a collection he made for his children of whatever he had learned, that was fine either in reading authors, or from the conversation of learned men. He called it so, because he had composed it at Athens during the winter, when the length of the nights afforded more time for application. Macrobius has copied several things from him without quoting him. There does not seem to be any great discernment in the topics he has chosen as the most considerable and most useful, which are generally grammatical remarks of little import-

ance. We are, however, indebted to him for many facts and monuments of antiquity, no where else to be found. Of the twenty books that compose this work, the eighth is entirely lost; nothing remaining of it but the titles of the chapters.¹ That wherein he transiently treats of the laws of the twelve tables is very much esteemed.

Aulus Gellius's style does not want force, but is often mixed with barbarous and improper words, which render it hard and obscure, and argues the age he lived in, from which little purity and elegance is to be expected.

Amongst the particulars, which he tells us of his life, he observes,² that while he was very young, being chosen by the pretors to adjudge some little affairs of private persons, one was brought before him, in which a man claimed a sum of money, that he pretended to have lent another. He proved this only by some circumstances of no great certainty, and had neither writing nor witness; but he was a man of unquestionable honour, irreproachable life, and known integrity. His opposite, on the contrary, who denied the debt, was notorious for his sordid avarice; and was proved to have been often convicted of fraud and perfidy. Aulus Gellius, to adjudge this cause, had taken with him several of his friends versed in the business of the bar, but who desired nothing so much as despatch, having a great deal of other affairs to attend to. Hence they made no difficulty to conclude, that a man could not be obliged to pay a debt, when there was no proofs that he owed it. Aulus Gellius could not resolve to dismiss the cause in this manner, believing one of the parties very capable of denying what he owed, and the other incapable of demanding what was not his due. He therefore referred judgment to another day, and went to consult Favorinus, who was then alive and at Rome: he was a philosopher of great reputation. Favorinus, upon his proposing the case to him, repeated a passage of Cato, which says, that on these occasions, where proofs were wanting, the ancient custom of the Romans was to examine, which of the two were the honestest man; and, when they were equally so, or equally otherwise, to adjudge the cause in favour of the person sued: whence Favorinus concluded, that with regard to two persons, so different in their characters as the parties in the cause, there was no difficulty to believe an honest man preferably to a knave. Whatever respect Aulus Gellius might have for this philosopher, he could not entirely give into his opinion; and, determining to do nothing against his conscience, he declined passing judgment in an affair, into which he could not sufficiently penetrate. The case would

¹ Lib. xx. c. 1.

² Gell. I. xiv. c. 2

have no difficulty with us, because the pretended debtor would be put to his oath, and be believed upon it.

ATHENÆUS.

Athenæus was of Naucratis, anciently a famous city of Egypt, upon an arm of the Nile that took its name from it. He lived in the reign of the emperor Commodus. He composed a work in Greek, which he called *Dipnosophista*, that is to say, *the banquet of the learned*; which abounds with curious and learned inquiries, and gives abundance of light into the Grecian antiquities. We have only an abridgment or extracts of the first books of his *Dipnosophista*, made, as Casaubon believes, at Constantinople, five or six hundred years ago.¹

JULIUS POLLUX.

Julius Pollux was the countryman and contemporary of Athenæus. He inscribed to Commodus, when only Cæsar, in the lifetime of Marcus Aurelius, the ten books which we have of his under the title of *Onomasticon*. It is a collection of the synonymous words by which the best Greek authors express the same thing. He was apparently one of the preceptors of Commodus. He pleased that prince with his fine voice, who gave him the chair of professor of eloquence, which had been founded at Athens. Philostratus, who places him among the sophists, ascribes to him a great knowledge of the Greek language, a taste for what was well or ill composed, and genius enough for eloquence, but little art.²

SOLINUS.

C. Julius Solinus has left us a description of the earth, under the name of *Polyhistor*. Vossius relates many opinions upon the time when this author lived, and concludes, that all which can be said of it is, that he preceded St. Jerome, who cites him, that is to say, after the first century, and before the end of the fourth.³ His work is only an extract from several authors, particularly Pliny the naturalist, and is done with no great genius and judgment.

PHILOSTRATUS.

There were many sophists of this name. We shall speak here only of him who wrote the life of Apollonius Tyanæus. He was one of the learned men, who frequented the court of the empress Julia, the wife of Severus.⁴ He pro-

fessed eloquence at Athens, and afterwards at Rome, in the reign of Severus. The life of Apollonius, written by Damis, the most zealous of his disciples, which was properly no more than memoirs very meanly composed, having fallen into Julia's hands, she gave it to Philostratus, who from these memoirs, and what he could extract from the works of Apollonius himself, and other writings, compiled the history we have of him. Eusebius asserts,⁵ that it were easy to show, that a great part of his narrations contradict themselves, and breathe nothing but fable and romance. Nor is he afraid to add, that his whole work abounds with fictions and falsities. Photius, who briefly repeats part of the facts of this history, treats many of them as impertinent fables.⁶ Suidas speaks of them to the same effect. The latter, besides the life of Apollonius, ascribes many other writings to Philostratus, and among the rest, four books of allegories and descriptions, which are still extant, and have been judged of great beauty, well sustained, and composed with all the delicacy of the Attic tongue.

MACROBIUS.

This author, at the head of his works, is called *Aurelius Theodosius Ambrosius Macrobius*. To which the epithet *Illustrious* is added, peculiar to those advanced to the highest dignities of the empire. He was of a country, where the Latin tongue was not commonly spoken, namely, of Greece or of the East, and lived in the reigns of Theodosius and his children. Though it is not certain that this author is the Macrobius mentioned in the laws of Honorius and Theodosius, it is, however, scarce to be doubted, but he lived about that time, as all the persons he introduces speaking in his *Saturnalia* lived very near it. He feigns this conversation, in order to collect all that he knew of antiquities, which he intended for the instruction of his son Eustathius, to whom he addresses it.⁷ And as he assembles in it all the greatest and most learned persons of Rome during the vacations of the *Saturnalia*, he gives that name to his work. He professes to relate things generally in the express words of the authors from whom he extracts them, because his view in it was not to display his eloquence, but to instruct his son: besides which, being a Greek, it was not quite easy for him to express himself in Latin. Accordingly his elocution is said to be neither pure nor elegant; and that in the passages where he speaks himself, a Greek seems talking broken Latin. As for the subjects of which he treats, they are agreeable and learned.

¹ Voss. hist. gr. l. ii. c. 15.

² Philost. p. 560, 500.

³ Voss. hist. Lat. l. iii.

⁴ Suidas. Ant. J. C. 194.

⁵ Euseb. in Hier.

⁶ Phot. c. 44.

⁷ Saturn. l. i. in Prefat.

Besides the *Saturnalia*, there are two books of Macrobius' upon the dream, ascribed by Cicero to Scipio, done also for his son Eustathius, to whom he addresses them.

DONATUS.

Donatus⁹ (*Ælius Donatus*) whose scholar St. Jerome was, taught grammar with great reputation at Rome, in the reign of the emperor Constantius. We have the commentaries upon Virgil and Terence, which are pretended to be the same, ascribed by St. Jerome to his master Donatus. The best judges believe, that there may be something of his in the comment upon Virgil, but that much is added to it unworthy of so able a hand. As to the comment upon Terence, it is attributed to Evanthius, otherwise called Eugraphius, who lived at the same time. Neither is it believed, that the lives of those two

poets were written by Donatus. We have some tracts upon grammar which bear his name, and are esteemed.

SERVIUS.

Servius (*Maurus Honoratus*) lived about the reigns of the emperors Arcadius and Honorius. He is known by the comment upon Virgil ascribed to him. It is the general opinion that this piece is only an abridgment extracted from the work of the true Servius, the loss of which these extracts have occasioned.

STOBÆUS.

Johannes Stobæus, a Greek author, lived in the fifth century. What remains of his collection has preserved some curious monuments of the ancient poets and philosophers. It is believed, that among these fragments many things have been added by those who came after him.

⁹ Ant. J. C. 354.

OF
POLITE LEARNING,
OR THE
BELLES LETTRES.

INTRODUCTION.

Poësy, History, and Eloquence, include whatever is principally meant by polite learning, or the *belles lettres*. Of all departments of literature, this has the most charms, displays the most lustre, and is in some sense the most capable of doing a nation honour by works, which are the finest and most exquisite production of the mind. I would not hereby be thought to undervalue the other sciences in the least, of which I shall speak in the sequel, and which cannot be too highly esteemed. I only observe, that those we are to treat of in this place, have something more animating, more shining, and consequently more apt to strike mankind, and to excite their admiration; that they are accessible to a great number of persons, and connect themselves more generally than the rest with the feelings and transactions of men of genius. Poësy seasons the solidity of her instructions with attractive graces, and the pleasing images, in which she industriously conveys them. History, in recounting the events of past ages in a lively and agreeable manner, excites and gratifies our curiosity, and at the same time gives useful lessons to kings, princes, and persons of all conditions, under borrowed names, to avoid offending their delicacy. And lastly, eloquence, now showing herself to us with a simple and modest grace, and now with all the pomp and majesty of a potent queen, charms the soul, while she engages the heart, with a sweetness and force, against which there is no resisting.

Athens and Rome, those two great theatres of human glory, have produced the greatest men of the ancient world, as well for valour and military knowledge, as ability in the arts of government. But would these great men have been known, or would not their names have

been buried with them in oblivion, without the aid of the arts in question, that have given them a kind of immortality, of which mankind are so jealous? These two cities themselves, which are still universally considered as the primitive sources of good taste in general, and which, in the midst of the ruins of so many empires, preserved a taste for polite learning, that never will expire; are they not indebted for that glory to the excellent works of poësy, history, and eloquence, with which they have enriched the universe?

Rome seemed in some sort to confine herself to this taste for the *Belles Lettres*; at least she excelled in an eminent degree only in this kind of knowledge, which she considered as more useful and more glorious than all others. Greece was more rich as to the number of sciences, and embraced them all without distinction. Her illustrious persons, her princes, and kings, extended their protection to science in general, of whatsoever kind and denomination. Not to mention the many others who have rendered their names famous on this account, to what was Ptolemy Philadelphus indebted for the reputation that distinguished him so much among the kings of Egypt, but to his particular care in drawing learned men of all kinds to his court, in loading them with honours and rewards, and by their means in causing all arts and sciences to flourish in his dominions. The famous library of Alexandria, enriched by his truly royal magnificence with so considerable a number of books, and the celebrated museum, where all the learned assembled, have made his name more illustrious, and acquired him a more solid and lasting glory, than the greatest of conquests could have done.

France does not give place to Egypt in this point. The king's famous library, infinitely

augmented by the magnificence of Louis XIV. is not the least illustrious circumstance of his reign. His successor Louis XV. who signalized the beginning of his own reign by the glorious establishment of free instruction in the university of Paris, to tread in the steps of his illustrious great-grandfather, has also made it his care and pride to augment and decorate the royal library. In a few years he has enriched it with from fifteen to eighteen thousand printed volumes, and almost eight thousand manuscripts, part of the library of Mr. Colbert, the most scarce and ancient come down to us; without mentioning those brought very lately from Constantinople by the Abbe Sevin; so that the king's library at present amounts to about ninety thousand printed volumes, and from thirty to thirty-five thousand manuscripts. It only remained to deposite so precious a treasure in a manner that might evince all its value, and answer the reputation and glory of the kingdom. This Louis XV. has also done, and fulfilled the intentions of his great-grandfather, by causing a superb edifice to be prepared for his library, which is already the admiration of all strangers, and, when finished, will be the most magnificent receptacle for books in Europe.

The museum of Alexandria was much admired: but what was it in comparison with our academies of architecture, sculpture, painting; the *Academie Françoise*,¹ that of polite learning or the *Belles Lettres*, and that of Sciences? Add to these the two most ancient foundations of the kingdom; the college royal, where all the learned languages, and almost all the sciences are taught; and the university of Paris, the mother and model of all the academies in the world, whose reputation so many ages have not impaired; and who, with her venerable wrinkles, continually retains the air and bloom of youth. If the number of the learned, who fill all these places, are added to the account, and their pensions estimated, it must be owned, that the rest of Europe has nothing comparable to France in these respects. For the honour of the present reign and ministry, I cannot forbear observing, that during the war lately terminated so happily and gloriously for us, the payment of all these pensions of the learned was neither suspended nor delayed.

The reader will, I hope, pardon this small digression, which however is not entirely foreign to my subject, for the sake of the warm love of my country, and the just sense of gratitude that occasioned it. Before I proceed to my subject, I think myself obliged to take notice, that I

shall make great use of many of the dissertations in the Memoirs of the Academy of Inscriptions and Belles Lettres, especially in what relates to poetry. Those extracts will show how capable that academy is of preserving the good taste of the ancients.

CHAPTER I.

OF THE POETS.

If we consider poetry in the purity of its first institution, it is evident, that it was invented originally to render the public homage of adoration and gratitude to the Divine Majesty, and to teach men the most important truths of religion. This art, which seems so profane in our days, had its birth in the midst of festivals, instituted in honour of the Supreme Being. On those solemn days, when the Hebrews celebrated the remembrance of the wonders God had wrought in their favour, and when, at rest from their labours, they gave themselves up to an innocent and necessary joy, all places resounded with canticles and sacred song, the noble, sublime, and majestic style of which suited the greatness of the God they praised. In those divine canticles what throngs do we not see of the most lively and animated beauties! Rivers rolling back to their sources; seas opening and flying with dread; hills that skip, and mountains that melt like wax and disappear; heaven and earth trembling and listening with awe and silence; and all nature in motion, and shaken before the face of its author.

But as the human voice alone failed in the utterance of such amazing wonders, and seemed too weak to the people to express the lively sense of gratitude and adoration with which they were animated, to express them with greater force, they called into their aid the big voices of thundering drums, trumpets, and all other instruments of music. In a kind of transport and religious enthusiasm this did not suffice; and the body was also made to have a part in the holy joy of the soul by impetuous but concerted emotions, in order that every thing in man might render homage to the Divinity. Such were the beginnings of music, dancing, and poetry.

What man of good taste, who, though not full of respect for the sacred books, should read the songs of Moses with the same eyes he reads the odes of Pindar, but would be obliged to own that this Moses, whom we know as the first historian and legislator of the world, is at the same time the first and most sublime of poets? In his writings, poetry even at the first instant of its birth appears perfect, because God himself inspires it, and the necessity of arriving by degrees at perfection, is a condition annexed only

¹ Academie Françoise, established 1635, for the purity of the French tongue.

to arts of human invention. The prophets and the psalms present us also with the like models. In them shines out that true poesy in all her majesty of light, which excites none but happy passions, which moves the heart without depraving it, which pleases without soothing our frailties, which engages our attention without amusing us with trivial and ridiculous tales, which instructs us without disgust, which makes us know God without representing him under images unworthy of the divine nature, and which always surprises without leading us astray through fantastic regions and chimerical wonders. Always agreeable, always useful; noble by bold expressions, glowing figures, and still more by the truths she denounces, it is she alone that deserves the name of divine language.

When men had transferred to creatures the homage due only to the Creator, poesy followed the fortune of religion, always preserving however traces of her first origin. She was employed at first to thank the false divinities for their supposed favours, and to demand new ones. She was soon indeed applied to other uses: but in all times care was taken to bring her back to her original destination. Hesiod has wrote the genealogy of the gods in verse: a very ancient poet composed the hymns usually ascribed to Homer; of which kind of poem Callimachus afterwards wrote others. Even the works, that turned upon different subjects, conducted and decided the events they related by the intervention and ministrations of divinities. They taught mankind to consider the gods as the authors of whatever happens in nature. Homer, and the other poets, every where represent them as the sole arbiters of our destinies. It is by them our courage is either exalted or depressed; they give or deprive us of prudence; dispense success and victory; and occasion repulse and defeat. Nothing great or heroic is executed without the secret or visible assistance of some divinity. And of all the truths they inculcate, they present none more frequently to our view, and establish none with more care, than that valour and wisdom are of no avail without the aid of Providence.

One of the principal views of poesy, and which was a kind of natural consequence of the first, was also to form the manners. To be convinced of this, we have only to consider the particular end of the several species of poetry, and to observe the general practice of the most illustrious poets. The Epic poem proposed from the first to give us instructions disguised under the allegory of an important and heroic action; the Ode, to celebrate the exploits of great men, in order to excite the general imitation of others; Tragedy, to inspire us with horror for guilt, by the fatal effects that succeed it; and with veneration for virtue, by the just

praises and rewards which attend it; Comedy and Satire, to correct whilst they divert us, and to make implacable war with vice and folly; Elegy, to shed tears upon the tombs of persons, who deserve to be lamented; and lastly, the Pastoral poem, to sing the innocence and pleasures of rural life. If any of these kinds of poetry have in succeeding times been employed to different purposes, it is certain, that they were made to deviate from their natural institution, and that in the beginning they all tended to the same end, which was to render man better.

I shall pursue this subject no farther, which would carry me beyond my bounds. I confine myself in speaking of the poets to those who have distinguished themselves most in each kind of poetry, and shall begin with the Greeks. I shall then proceed to the Latins, partly uniting them, however, sometimes, especially when it may seem necessary to compare them with each other. As I have occasionally treated part of what relates to these illustrious writers elsewhere, to avoid useless and tedious repetitions, the reader will permit me to refer him thither, when the same matter recurs.

ARTICLE I.

Of the Greek Poets.

Every body knows, that poesy was brought into Italy from Greece, and that Rome is indebted to her for all the reputation and glory she acquired of this kind.

SECT. I.

Of the Greek Poets, who excelled in Epic Poetry.

I do not rank either the Sibyls, or Orpheus, and Musæus,¹ in the number of the poets. All the learned agree, that the poems ascribed to them are supposititious.

HOMER.

The period of time when Homer was born is not very certain. Herodotus² places it four hundred years before himself, and Usher fixes the birth of Herodotus in the year of the world 3520. According to which Homer must have been born in the year 3120, that is to say, 340 years after the taking of Troy. We have no better assurances concerning the place of his nativity, for which honour seven cities contended. Smyrna seems to have carried it against the rest.

¹ Of these some account will be found in the Supplement to the article *Musæus*.—*Ed.*

² Herod. l. ii. c. 53.

I have spoken of epic poetry and Homer in the ancient history,³ and with much greater extent in the first of my treatise upon the study of the Belles Lettres, where I have endeavoured to give the reader a taste of the beauties of this poet.⁴

Virgil, if we may judge of his views by his work, seems to have proposed no less to himself than to dispute the superiority of epic poetry with Greece, and borrowed arms from his rival himself for that purpose. He justly discerned, that as he was to bring the hero of his poem from the banks of the Scamander, it would be necessary for him to imitate the

Odyssey, which contains a great series of voyages and narratives; and as he was to make him fight for his settlement in Italy, that it would be as necessary to have the Iliad perpetually before his eyes, which abounds with action, battles, and all that intervention of the gods, which heroic poetry requires. Æneas makes voyages like Ulysses, and fights like Achilles. Virgil has interwoven the forty-eight books of Homer in the twelve of the Æneid. In the six first we discover the Odyssey almost universally, as we do the Iliad in the six last.

The Greek poet has a great advantage, and no less title to superiority, from having been the

³ See vol. i. p. 283.

⁴ The following remarks are taken from Schieggel's admirable Lectures on the History of Literature.—“To the Greeks the poems of Homer possessed a near and a national interest of the most lively and touching character, while to us their principal attraction consists in the more universal charm of beautiful narration, and in the lofty representations which they unfold of the heroic life. For here there prevails not any peculiar mode of thinking, or system of prejudices, adapted to live only within a limited period, or exclusively to celebrate the fame and pre-eminence of some particular race;—defects which are so apparent both in the old songs of the Arabians, and in the poems of Ossian. There breathes throughout these poems a freer spirit, a sensibility more open, more pure, and more universal—alive to every feeling which can make an impression on our nature, and extending to every circumstance and condition of the great family of man. A whole world is laid open to our view in the utmost beauty and clearness, a rich, a living, and an ever moving picture. The two heroic personages of Achilles and Ulysses, which occupy the first places in this new state of existence, embody the whole of a set of universal ideas and characters which are to be found in almost all the traditions of heroic ages, although nowhere else so happily unfolded, or delineated with so masterly a hand. Achilles, a youthful hero, who, in the fulness of his victorious strength and beauty, exhausts all the glories of the fleeting life of man, but is doomed to an early death and a tragical destiny, is the first and most lofty of these characters; and a character of the same species is to be found in numberless poems of the heroic age, but perhaps now where, if we except the writers of Greece, so well developed as in the sagas of our northern ancestors. Even among the most lively nations, the traditions and recollections of the heroic times are invested with a half mournful and melancholy feeling, a spirit of sorrow, sometimes elegiac, more frequently tragical, which speaks at once to our bosoms from the inmost soul of the poetry in which they are embodied: whether it be that the idea of a long vanished age of freedom, greatness, and heroism, stamps of necessity such an impression on those who are accustomed to live among the narrow and limited institutions of after times, or whether it be not rather that poets have chosen to express, only in compositions of a certain sort and in relation to certain periods, those feelings of distant reverence and self-abasement with which it is natural to us at all times to reflect on the happiness and simplicity of ages that have long passed away. In Ulysses we have displayed another and a less elevated form of the heroic life, but one scarcely less fertile in subjects for poetry, or less interesting to the curiosity of posterity. This is the voyaging and wandering hero, whose experience and

acuteness are equal to his valour, who is alike prepared to suffer with patience every hardship, and to plunge with boldness into every adventure; and who thus affords the most unlimited scope for the poetical imagination, by giving the opportunity of introducing and adorning whatever of wonderful or of rare is supposed, during the infancy of geography, by the simple people of early societies, to belong to ages and places with which they are personally unacquainted. The Homeric works are equalled, or perhaps surpassed, in awful strength and depth of feeling by the poetry of the north—in audacity, in splendour, and in pomp, by that of the oriental nations. Their peculiar excellence lies in the intuitive perception of truth, the accuracy of description, and the great clearness of understanding, which are united in them, in a manner so unique, with all the simplicity of childhood, and all the richness of an unrivalled imagination. In them we find a mode of composition so full, that it often becomes prolix, and yet we are never weary of it, so matchless is the charm of the language, and so airy the lightness of the narrative; an almost dramatic development of characters and passions, of speeches and replies, and an almost historical fidelity in the description of incidents the most minute. It is perhaps to this last peculiarity, which distinguishes Homer so much, even among the poets of his own country, that he is indebted for the name by which he is known to us. For *Homeros* signifies, in Greek, a witness or voucher, and this name has probably been given to him on account of his truth—such truth, I mean, as it was in the power of a poet, especially a poet who celebrates heroic ages, to possess. To us he is indeed a *Homér*—a faithful voucher, an unfalsifying witness of the true shape and fashion of the heroic life. The other explanation of the word *Homeros*—‘a blind man’—is pointed out in the often repeated and vulgar history which has come down to us of the life of a poet, concerning whom we know absolutely nothing, and is without doubt altogether to be despised. In the poetry of Milton, even without the express assertion of the poet himself, we can discover many marks that he saw only with the internal eye of the mind, but was deprived of the quickening and cheering influence of the light of day. The poetry of Ossian is clothed, in like manner, with a melancholy twilight, and seems to be wrapped, as it were, in an everlasting cloud. It is easy to perceive that the poet himself was in a similar condition. But he who can conceive that the Iliad and Odyssey, the most clear and luminous of ancient poems, were composed by one deprived of his sight, must, at least in some degree, close his own eyes, before he can resist the evidence of so many thousand circumstances which testify, so incontrovertibly, the reverse.”—*Ed.*

original, which the other copied; and what Quintilian says of Demosthenes in regard to Cicero, may with equal justice be applied to him, that however great Virgil may be, Homer in a great measure made him what he is.¹ This advantage does not, however, fully decide their merit, and to which of them the preference ought to be given, will always be a matter of dispute. We may in this point abide by the judgment of Quintilian, who, while he leaves the question undecided, in a few words perfectly specifies the characters, that distinguish those two excellent poets. He tells us, there is more genius, and force of nature in the one, and more art and application in the other; and that what is wanting in Virgil on the side of the sublime, in which the Greek poet is indisputably superior, is perhaps compensated by the justness and equality that prevail universally throughout the *Æneid*. *Et hercle, ut illi naturæ celesti atque immortalī cesserimus, ita curæ et diligentia vel ideo in hoc plus est, quod ei fuit magis laborandum: et quantum eminentioribus vincimur, fortasse æqualitate pensamus.* It is very hard to characterise these two poets better. The *Iliad* and *Odyssey* are two great paintings, of which the *Æneid* is an abridgment or miniature. The latter requires a nearer view: every thing in it therefore must be perfectly finished. But great pictures are seen at a distance: it is not necessary, that they should be so exact and regular in all their strokes: too scrupulous a niceness is even a fault in such paintings.

HESIOD.

Hesiod is said to have been born at Cumæ, a city of *Æolia*, but brought up from his infancy at *Ascræ*, a small town of *Beotia*, which on that account passed for his country: Virgil also calls him the old man of *Ascræ*.² Authors differ much concerning the time in which he lived. The most general opinion is, that he was Homer's cotemporary. Of all his poems only three have come down to us: these are, *The Works and Days*; *The Theogonia*, or, the genealogy of the gods; and *The Shield of Hercules*; of which I have spoken elsewhere. Quintilian gives us his character in these words:—"Hesiod seldom rises upon himself, and the greatest part of his works consists almost entirely of proper names. He has however useful sentences for the conduct of life, with sweetness enough of words, and no un-

happiness of style. He is allowed to have succeeded best in the middle way of writing."³

POETS LESS KNOWN.

TERPANDER, flourished A. M. 3356. He was very famous both for poetry and music.

TYRTEUS, flourished A. M. 3364. He is believed to have been an Athenian.⁴ This poet made a great figure in the second war of *Messene*. He excelled in celebrating military exploits. The Spartans had been several times defeated to their great discouragement. The oracle of *Delphos* bade them ask a man of the Athenians capable of assisting them with his counsel and abilities. Tyrteus was sent them. The consequence at first did not answer the expectations of the Spartans. They were again defeated three times successively, and were upon the point of returning to *Sparta* in despair. Tyrteus re-animated them by his verses, which breathed nothing but love of one's country and contempt of death. Having resumed courage they attacked the *Messenians* with fury, and the victory they obtained upon this occasion, terminated a war they could support no longer to their advantage. They conferred the freedom of their city upon Tyrteus, a privilege they were by no means too profuse of at *Lacedæmon*, which made it exceedingly honourable. The little that remains of his writings, shows that his style was very vigorous and noble. He seems transported himself with the ardour, he endeavours to give his hearers.

Tyrteusque mares animos in Martia bella
Versibus exauit. *Horat. in Art. Poet.*

By verse the warrior's fire Tyrteus feeds,
And urges manly minds to glorious deeds.

DRACO, a celebrated Athenian legislator, flourished A. M. 3368. He composed a poem of three thousand lines, entitled, *Troicaea*, in which he laid down excellent precepts for the conduct of life.

ABARIS, a Scythian by nation according to *Suidas*, surnamed by others the *Hyperborean*, flourished A. M. 3368.⁵ He composed several pieces of poetry. Stories of the last absurdity are told of him, which even *Herodotus* himself does not seem to believe. He contents himself with saying, that *Barbarian* had carried an arrow throughout the whole world, and that he ate nothing. *Jamblicus*⁶ goes farther, and pre-

¹ Cedendum vero in hoc quidem, quod et ille (*Demosthenes*) prior fuit, et ex magna parte *Ciceronem*, quantus est, fecit. Lib. x. cap. 1.

² *Ascræumque senem.* *Eclg.* 6.

³ Raro assurgit *Hesiodus*, magnæque paræ ejus in nominibus est occupata: tamen utiles circa præcepta sententiæ, lenitasque verborum et compositionis probabilitas: daturque ei palma in illo medio dicendi genere. Lib. x. cap. 1.

⁴ *Pausan.* l. iv. p. 244, &c.

⁵ *Suidas.* *Herod.* l. iv. c. 36.

⁶ *Jambli.* in vit. *Pyth.*

tends that Abaris was carried by his arrow through the air, and passed rivers, seas, and the most inaccessible places in that manner, without being stopped by any obstacle. It is said that upon account of a great plague that raged in the country of the Hyperboreans, he was deputed to Athens by those people.

CHÆRILUS flourished A. M. 3676. There were several poets of this name. I speak of him in this place,⁷ who notwithstanding the badness of his verses, in which there was neither taste nor beauty, was however much esteemed and favoured by Alexander the Great, from whom he received as great a reward as if he had been an excellent poet. Horace observes, that liberality argued little taste in that prince, who had been so delicate in respect to painting and sculpture, as to prohibit by an edict all painters except Apelles to draw his picture, and all statuary, but Lysippus, to make his statue in brass. Sylla, among the Romans, acted as liberally, but with more prudence, than Alexander in regard to a poet, who had presented him with some wretched verses. He ordered a reward to be given him upon condition that he would never write more: very hard terms to a bad poet, however reasonable in themselves.⁸

ARATUS was of Soloe, a city of Cilicia, flourished A. M. 3732. He composed a poem upon astronomy, which was very much esteemed by the learned, according to Cicero. Quintillian speaks less favourably of it.⁹ He says, that the subject of Aratus was very dry and unaffecting, from having neither variety, passions, character, nor harangue in it:¹⁰ but that however he had done as much with it as his matter would admit, and had made choice of it as suiting his capacity. Cicero, at seventeen years of age, had translated the poem of Aratus into Latin verse, of which many fragments are come down to us in his treatise *De Natura Deorum*.

APOLLONIUS of Rhodes who flourished A. M. 3756, composed a poem upon the expedition of the Argonauts: *Argonautica*. He was a native of

Alexandria, and had succeeded Eratosthenes as keeper of the famous library there in the reign of Ptolemaeus Evergetes. Upon seeing himself ill treated by the other poets of that place, who loaded him with calumnies, he retired to Rhodes, where he passed the rest of his days. This occasioned his being surnamed the *Rhodian*.

EUPHORIION of Chalcis, flourished A. M. 3758. Antiochus the Great intrusted him with the care of his library.¹¹ Virgil mentions him in his *Bucolics*.¹²

NICANDER of Colophon in Ionia, or, according to others, of Ætolia. He flourished in the time of Attalus, the last king of Pergamus, A. M. 3852. He composed some poems upon medicine; *Θηριακά* and *Ἀντιρρητικά*, and others upon agriculture, which¹³ Virgil imitated in his *Georgics*.

ANTIPATER of Sidon, flourished A. M. 3856. Cicero¹⁴ informs us, that he had so great a talent for poetry, and such a facility in making verses, that he could express himself extemporaneously in hexameters, or any other kind of verse, upon any subject. Valerius Maximus, and Pliny¹⁵ say, that he had a fever regularly once every year upon the same day; which was the day of his birth and death.

A. LICINIUS ARCHIAS, for whom Cicero's oration is extant, flourished A. M. 3318. He wrote a poem upon the war with the Cimbri, and began another upon Cicero's consulship. We have still some of his epigrams in the *Anthologia*.

PARTHENIUS lived at the same time. He had been taken prisoner in the war with Mithridates, and was Virgil's master in Greek poetry.¹⁶

APOLLINARIUS, bishop of Laodicea in Syria, flourished A. D. 362. I do not consider him here as a bishop, but as a poet, who distinguished himself very much by Christian poetry. Julian the apostate forbade all masters by a public edict, to teach the children of Christians the profane authors. The pretext for this edict was, that it was not consistent to explain them to youth as illustrious writers, and at the same time to condemn their religion. But the true motives for that prohibition were the great advantages the Christians found in the profane books against paganism. This edict induced the two Apollinarii to compose several works on use to religion.

7 *Gratus Alexandro regi magno fuit ille
Cherilus, incultis qui versibus et male natis
Retulit acceptos, regale numisma, Philippo.*

Idem rex ille, poema

Qui tam ridiculum tam carè prodigus emit,
Edicto vetuit ne quis se, prætor Apellens,
Pingeret, aut alius Lysippo duceret ara
Fortis Alexandri vultum simulantia.

Hor. Ep. i. l. 2.

8 *Jussit ei premium tribui, sub ea conditione ne quid
poeta scriberet. Cic. pro Arch. poet. n. 25.*

9 *Constat inter doctos hominem ignarum Astrologiæ,
ornatissimis atque optimis versibus Aratum de cælo stel-
lisque dixisse.*

10 *Arati materia motu caret, ut in qua nulla varietas,
nullus affectus, nulla persona, nulla cujusquam sit oratio.
Sufficit tamen operi, cui se parem credidit. Lib. x. c. l.*

11 *Quid! Euphoriionem transibimus? Quem nisi probasset Virgilius, idem nunquam certè conditorum Chalcidico versu carminum fecisset in Bucolicis mentionem. Quintill. l. x. c. l.*

12 *Eclog. x. v. 50.*

13 *Quid! Nicandrum frustra secuti Macer atque Virgilius? Quintill. Ibid.*

14 *Lib. Æl. de Orat. n. 194.*

15 *Val. Max. l. i. c. 8. Plin. l. vii. c. 51.*

16 *Macroh. l. v. c. 17.*

The father of whom we speak, and who was a grammarian, wrote in heroic verse, and in imitation of Homer, the sacred history in twenty-four books down to the reign of Saul, denominating each book with a letter of the Greek alphabet. He imitated Menander in comedies, Euripides in tragedies, and Pindar in odes; taking his subjects from the holy scripture, and observing the character and style of the several kinds of poetry in which he wrote, in order that the Christians might dispense with the want of the profane authors in learning the Belles Lettres.

His son, who was a sophist, or rhetorician and philosopher, composed dialogues after the manner of Plato, to explain the gospels and the doctrine of the apostles.

Julian's persecution was of so short a continuance, that the works of the Apollinarii became useless; and the profane authors were again read. Hence, of all their poems, none are come down to us, except the Psalms paraphrased by Apollinarius the elder, who had the misfortune to give into heterodox opinions concerning Jesus Christ.

St. GREGORY of Nazianzen, who flourished A. D. 350, cotemporary with Apollinarius, composed also a great number of verses of all kinds: Suidas makes them amount to thirty thousand, of which only a part have been preserved. Most of them were the employment and fruit of his retirement. Though he was very much advanced in years at the time he wrote them, we find in them all the fire and vigour that could be desired in the works of a young man.

In composing his poems, which served him for amusement in his solitude, and for consolation in his bodily infirmities, he had young persons, and those who love polite learning, in view. To withdraw them from dangerous songs and poems, he was for supplying them with an innocent and useful diversion, and at the same time for rendering the truth agreeable to them. There is also reason to believe, that one of his views was to oppose poems, in which every thing was strictly orthodox, to those of Apollinarius, that contained many opinions repugnant to the Christian faith. In making poetry subservient in this manner to religion, he recalled it to its primitive institution. He treated nothing in his verses but such subjects of piety, as might animate, purify, instruct, or elevate the soul to God. In proposing sound doctrine to Christians in them, he banishes from them all the filth and folly of fable; and would have thought it profaning his pen, to have employed it in reviving the heathen divinities, that Christ had come to abolish.

Such are the models we ought to follow. I speak here of a saint, who had all the beauty, vivacity, and solidity of wit, it is possible to

imagine. He had been instructed in the Belles Lettres by the most able masters at that time of the pagan world. He had read with extreme application all the ancient poets, of which we often find traces even in his prose writings. He contented himself with having acquired a refined taste of poetry from them, and with having thoroughly studied and comprehended all their beauties and delicacy; but never introduced any of the profane divinities into his own pieces; which were not re-admitted by the poets till many ages after. Ought what these glorious ages of the church condemned and forbade to be allowed now? I have treated this subject elsewhere to some extent.

For the honour of poetry and the poets, I ought not to omit mentioning EUDOCIA, the daughter of the sophist Leontius the Athenian, who, before she was a Christian, and had married the emperor Theodosius the younger, was called Athenais. Her father had given her an excellent education, and made her extremely learned and judicious. The surprising beauty of her aspect was, however, inferior to that of her wit. She wrote an heroic poem upon her husband's victory over the Persians, and composed many other pieces upon pious subjects, of which we ought very much to regret the loss. She lived about A. D. 420.

SYNESIUS, bishop of Ptolemais, lived at the same time. Only ten hymns of his are come down to us.

I pass over in silence many other poets mentioned by authors, but little known to us, and am afraid that I have already been only too long upon those of this kind.

I proceed now to the tragic and comic poets. But as I have treated both with sufficient extent in the ancient history,¹ I shall do little more in this place than mention their names, and the times when they lived.

SECT. II.

Of the Tragic Poets.

THESIS, who flourished A. M. 3480, is considered as the inventor of tragedy.² It is easy to judge how gross and imperfect it was in its beginning. He smeared the faces of his actors with lees of wine, and carried them from village to village in a cart, from which they represented their pieces. He lived in the time of Solon.³ That wise legislator, being present one

1 Method of studying the Belles Lettres, vol. i.

2 See vol. i. p. 577.

3 Ignotum tragicæ genus invenisse Cameræ
Dicitur et plaustris vexisse poemata Thepis,
Quæ canerent ægerentque peruncti facibus Jra.

Illost. Art. Poet.

4 Plut. in Solon. p. 95.

day at one of these representations, cried out, striking the ground with his stick, "I am very much afraid, that these poetical fictions, and ingenious fancies, will soon have a share in our public and private affairs."

ÆSCHYLUS, who flourished A. M. 3508, was the first that improved tragedy, and placed it in honour.⁵ He gave his actors masks, more decent dresses, the high heeled boot or buskin called *Cothurnus*, and built them a little theatre. His manner of writing is noble, and even sublime; his elocution lofty, and soaring often to bombast.⁶

In a public dispute of the tragic poets, instituted upon account of the bones of Theseus which Cimon had brought to Athens, the prize was adjudged to Sophocles.⁷ The grief of Æschylus was so great upon seeing himself deprived by a young poet of the glory he had so long possessed, of being the most excellent in the theatre, that he could not bear to stay in Athens any longer. He left it, and retired to Sicily, to the court of king Hiero, where he died in a very singular manner.—As he lay asleep in the country with his baldhead uncovered, an eagle taking it for a stone, let fall a heavy tortoise upon it, which killed him. Of fourscore and ten tragedies which he composed, some say only twenty-eight, and others no more than thirteen, carried the prize.

SOPHOCLES and EURIPIDES flourished A. M. 3532. These two poets appeared at the same time, and rendered the Athenian stage very illustrious by tragedies equally admirable, though very different in their style.⁸ The first was great, lofty, and sublime: the other tender, pathetic, and abounding with excellent maxims for the manners and conduct of human life. The judgment of the public was divided in respect to them; as we are at this day in regard to two poets,⁹ who have done so much honour to the French stage, and made it capable of disputing pre-eminence with that of Athens.

SECT. III.

Of the Comic Poets.

EUPOLIS, CRATINUS, and ARISTOPHANES, who flourished A. M. 3564, made the comedy, called Ancient Comedy, very famous. This served

the Greeks instead of satire. The highest perfection of what is called Atticism, was peculiar to it, that is to say, whatever is finest, most elegant, and most delicate in style, to which no other poetry could come near. I have spoken of it elsewhere.

MENANDER, who flourished A. M. 3580, was the first and the best author of the New Comedy. Plutarch prefers him infinitely to Aristophanes.¹⁰ He admires an agreeable, refined, delicate, lively spirit of humour, a vein of pleasantry in him, that never departs in the least from the strictest rules of probity and good manners: whereas the bitter and merciless raillery of Aristophanes is excessive abuse, is murder in jest, that without the least reserve, tears the reputation of the most worthy to pieces, and violates all the laws of modesty and decency with an impudence that knows no bounds. Quintilian is not afraid to declare, that the brightness of Menander's merit had entirely eclipsed and obliterated the reputation of all the writers in the same way.¹¹ But the greatest praise which can be given this poet, is to say, that Terence, who scarce did any thing besides copying his plays, is allowed by good judges to have fallen very short of his original.

Aulus Gellius¹² has preserved some passages of Menander, which had been imitated by Cæcilius an ancient Latin comic poet. At the first reading he thought the verses of the latter very fine. But he affirms, that as soon as he compared them with those of the Greek poet, their beauty entirely disappeared, and they seemed wretched and contemptible.

Menander was not treated with all the justice he deserved during his life. Of more than an hundred comedies which he brought upon the stage, only eight carried the prize. Whether through intrigue or combination against him, or the bad taste of the judges, PHILEMON, who undoubtedly deserved only the second place, was always preferred before him.¹³

In the Ancient History, (vol. I. p. 561,) we have explained all that relates to the Ancient, Middle, and New Comedy.

SECT. IV.

Of the Iambic Poets.

ARCHILOCHUS, a native of Paros, the inventor of Iambic verses, lived in the reign of Candaules,

5 Post hunc personæ pallesque repertor honestæ
Æschylus, et modicis instravit pulpita tignis,
Et docuit magnamque loqui, nitique Cothurno.

Hor. *Ibid.*

6 Tragedias primus in lucem Æschylus protulit, sublimis, gravis, et grandiloquus, sæpe usque ad vitium. *Quinctil.* l. x. c. 1.

7 Plut. in Cimon. p. 463.

8 Longe clarius illustraverunt hoc opus Sophocles atque Euripides: quorum in dispari dicendi vi uter sit poeta melior, inter plurimos queritur. *Quinctil. ibid.*

9 Corneille and Racine.

10 Plut. in Moral. p. 853.

11 Atque ille quidem omnibus ejusdem operis auctoribus abstulit nomen, et fulgore quodam suæ claritatis tenebras obduxit. *Ibid.*

12 Lib. ii. c. 23.

13 Philemon, ut pravus sui temporis judicii Menandro sæpe prælatus est, ita consensu omnium meruit credi secundus. *Quinctil. ibid.*

king of Lydia, A. M. 3380. See what we have said of him in the *Ancient History*, vol. i. p. 284.

HIPPONAX was a native of Ephesus, and flourished A. M. 3460. Upon being expelled thence by the tyrants that governed there, he went and settled at Clazomene.¹ He was ugly, short, and thin: but his ugliness occasioned his being immortalized: for he is hardly known by any thing except the satirical verses he composed against the brothers, Bupalus and Athenis, two sculptors who had made his figure in the most ridiculous manner in their power. He discharged such a number of keen and virulent verses against them, that, according to some authors, they hanged themselves through vexation. But Pliny observes, that statues of theirs were in being, made after that time. The invention of the verse called *Scazon*, *limping*, is ascribed to Hipponax, in the last foot of which there is always a spondee instead of an Iambus.

SECT. V.

Of the Lyric Poets.

The poetry, which was made to be sung to the lyre, or the like instruments, was called lyric poetry. Compositions of this kind were named odes, or songs, and were divided into strophes or stanzas.

The end of poetry is to please the imagination. But if the different kinds of poetry, as the pastoral, elegiac, and epic, attain that end by different means, the ode attains it more certainly, because it includes them all; and as the famous painter of old united in one picture all that he had observed of most graceful and consummate in many of the fair sex, so the ode unites in itself all the different beauties, of which the different species of poetry are susceptible. But it has still something else peculiar to itself, which constitutes its true character. This is enthusiasm; in which view the poets believe, they may also compare her to that Juno of Homer, who borrows the girdle of Venus to exalt the graces of her form, but who is still the same queen of the gods, distinguished by the air of majesty peculiar to her, and even by the fury and violence of her character. This enthusiasm is more easy to conceive, than possible to define. When a writer is seized with it, his genius glows ardent, his imagination catches fire, and all the faculties of his soul awake, and concur to the perfection of his work. Now noble thoughts and the most shining strokes of wit, and now the most tender and beautiful images, crowd upon him. The warmth also of his enthusiasm often transports him in such a manner, that he can contain himself no longer;

he then abandons himself to that living impetuosity, that beautiful disorder, which infinitely transcend the regularity of the most studious art.

These different impressions produce different effects: descriptions sometimes simple but exquisitely beautiful, and sometimes rich, noble, and sublime; comparisons just and lively; shining strokes of morality; allusions happily borrowed from history or fable; and digressions a thousand times more beautiful than the chain of the subject itself. Harmony, the soul of verse, at this moment costs the poet no trouble. Noble expressions, and happy numbers spontaneously rise up, and dispose themselves in due order, like stones to the lyre of Amphion; and nothing seems the effect of study or pains. The poems of enthusiasm have such a peculiar beauty, that they can neither be read nor heard without imparting the same fire that produced themselves; and the effect of the most exquisite music is neither so certain nor so great, as that of verses born in this poetic fury,—this diviner flame of the mind.

This little passage, which I have extracted from the short but eloquent dissertation of the Abbé Fraguier upon Pindar, suffices to give the reader a just idea of lyric poetry, and at the same time of Pindar, who holds the first rank among the nine Greek poets that excelled in this way of writing, of whom it remains for me to say a few words.

Plutarch speaks of THALES,² whom Lycurgus persuaded to go and settle at Sparta,³ A. M. 3155. He was a lyric poet, (not one of the nine mentioned above,) but under the appearance of composing only songs, he in effect did all that the gravest legislators could have been capable of doing. For all his poetical pieces were so many discourses to incline men to obedience and concord by the means of certain numbers so harmonious, so elegant, strong, and sweet, that they insensibly rendered the manners of those that heard them less rude and savage, and induced a love of order and probity, by banishing the animosities and divisions that prevailed among them. Thus by the charming impressions of a melodious kind of poetry, he prepared the way for Lycurgus to instruct and amend his citizens.

ALCMAN was a native of Sardis in Lydia, flourished A. M. 3324. The Lacedæmonians adopted him on account of his merit, and granted him the freedom of their city, upon which he congratulates himself in his poems as a singular honour to him.⁴ He flourished in the time of Ardy, son of Gyges, king of Lydia.

² Plutarch seems to confound this Thales with Thales of Miletus, one of the seven sages, who lived above two hundred and fifty years after him.

³ Plut. in Lycurg. p. 41.

⁴ Plut. de exil. p. 500.

¹ Suidas.

STESICHORUS was of Himera, a city of Sicily, flourished A. M. 3398. Pausanias⁵ relates, that this poet having lost his sight as a punishment for verses which he had made in dispraise of Helen, did not recover it till he had recanted his invectives by a new piece, the reverse of the former, which was afterwards called *Palinodia*. Quintilian⁶ tells us, that he sung of great wars, and the most illustrious heroes, and that he sustained the pomp and sublimity of epic poetry on the lyre. Horace gives him the same character in a single epithet, *Stesichorice graves Camenæ*, Stesichorus' lofty muse.

ALCÆUS, flourished A. M. 3400. He was born at Mitylene, a city of Lesbos: it is from him the *Alcæic* verse took its name. He was a declared enemy to the tyrants of Lesbos, and in particular to Pittacus, whom he perpetually lashed in his poems. He is said⁷ to have been seized with such terror in a battle where he happened to be, that he threw down his arms, and fled. Horace relates a like adventure of himself.⁸ Poets pique themselves less upon their valour than their wit. Quintilian says, that the style of Alcæus is close, lofty, correct, and what crowns his praise, that he very much resembles Homer.⁹

SAPPHO. She was of the same place, and lived at the same time with Alcæus. The Sapphic verse is so called from her. She had three brothers, Larychus, Eurygius, and Charaxus. She celebrated the first extremely in her poems, and on the contrary is severe against Charaxus, for being desperately in love with the courtesan Rhodope, the same that built one of the pyramids of Egypt. Sappho composed a considerable number of poems, of which only two are come down to us, but these suffice to prove, that the praises given her by all ages for the beauty, passion, numbers, harmony, and delicacies of her verse, are not without foundation. Hence she was called the Tenth Muse, and the people of Mitylene caused her image to be stamped on their coin. It were to be wished that the purity of her manners had equalled the beauty of her genius, and that she had not dishonoured her sex and poetry by her vices and licentiousness. It is said, that frantic with despair through the obstinate resistance to her desires of Phaon, a young man of Lesbos, she threw herself into the sea from the top of the

promontory of Leucadia in Acarnania: a remedy frequently used in Greece by those who were unfortunate in this passion.

ANACREON flourished A. M. 3512. This poet was of Teos, a city of Ionia. He passed much of his time at the court of Polycrates,¹⁰ tyrant of Samos, famous for the uninterrupted prosperity of his life, and tragical end; and was not only one of all his parties of pleasure, but one of his council. Plato informs us,¹¹ that Hipparchus, one of the sons of Pisistratus, sent a galley of fifty oars to Anacreon, and wrote to him in the most obliging terms, to prevail upon him to come to Athens, where his fine works would be esteemed and relished according to their merit. Joy and pleasure are said to have been his sole study, as indeed we may well believe from what remains of his poems. They every where show, that his hand wrote what his heart felt, and are of a delicacy more easy to conceive than express. Nothing would be more estimable than his compositions, had their object been better.

SIMONIDES flourished A. M. 3444. He was of the island of Cea, one of the Cyclades in the Ægean Sea. He wrote the famous naval battle of Salamin in the Doric dialect. His style was delicate, natural, and agreeable.¹² He was pathetic, and excelled in exciting compassion, which was his peculiar talent, and that by which the ancients have characterized him.

Paulum quidlibet allocutionis
Mœstius lachrymis Simonideis. CATULL.

Something sadder to my ears
Than Simonides in tears.

Horace says of him to the same effect—

Sed ne, relictis, musa procax, jocis,
Cœa retractes munera nœmia.

But whither, wanton muse, away,
Wherefore cease we to be gay,
Things of woe why thus prolong,
Things that fit the Cean's song?

LYCÆUS flourished A. M. 3464. Nothing is known of him, besides his name, and a few fragments that have come down to us.

BACCHYLIDES flourished A. M. 3552. He was of the island of Cea and the son of a brother of Simonides. Hiero preferred his poems to those of Pindar in the Pythian games. Ammianus Marcellinus says, that Julian the apostate delighted much in reading this poet.

⁵ Pausan. in Lacon. p. 220.

⁶ Stesichorum, quam sit ingenio validus, materis quoque ostendunt, maxima bella et clarissimos canentem duces, et Epici carminis onera lyra sustinentem. *Lib. x. cap. 1.*

⁷ Herod. l. v. c. 95.

⁸ Tecum Philippos et celerem fugam
Sensit, relictis non bene parmula.

⁹ In eloquendo brevis, et magnificus, et diligens, plurimque Homero similis. *L. x. c. 1.*

¹⁰ Her. l. iii. p. 121. ¹¹ In Hipparch. pp. 228, 229.

¹² Simonides tenuis, alioqui sermone proprio et jucunditate quadam commendari potest. Præcipua tamen ejus in commovenda miseratione virtus, ut quidam in hac cum parte omnibus ejusdem operis auctoribus præferant. *Quintil. l. x. c. 1.*

PINDAR flourished A. M. 3288. Quintillian places him at the head of the nine lyric poets. His peculiar merit and prevailling character are that majesty, that grandeur, and sublimity, which often exalt him above the rules of art, to which it were wrong to expect, that the productions of a great genius should be servilely confined. We find in his odes a sensible effect of the enthusiasm I have spoken of in the beginning of this section. It might appear a little too bold, if not softened with a mixture of less ardent and more agreeable beauties. The poet discerned this himself; which made him strew flowers abundantly from time to time. His celebrated rival Corynna reproached him with excess in this point.

Horace indeed praises him only for his sublimity. He calls it a swan, borne by the impetuosity of his flight, and the aid of the winds, above the clouds; a torrent, that swelled by rains, bears down all before it in the rapidity of its course. But to consider it in other lights; it is a smooth stream, rolling its clear pure waves over golden sands, through flowery banks and verdant plains; a bee, collecting whatever is most precious from the flowers, for the composition of its fragrant nectar. His style is always suited to his manner of thinking, close, concise, without too many express connexions, or transitionary terms: these may be sufficiently inferred, and their absence exalts the vigour of his verses. Attention to transitions would have abated the poet's fire, in giving his enthusiasm time to cool.

In speaking thus of Pindar, I do not pretend to propose him as an author without faults. I own he has some, which it is not easy to excuse: but at the same time, the number and greatness of the beauties, with which they are attended, ought to cover them. Horace, who is a good judge of every thing, and especially of our present subject, must have had a very high idea of his merit, as he is not afraid to say, that to emulate him is manifest temerity: *Pindarum quisquis studet emulari, &c.*

Pindar had a dangerous rival in the person of CORYNNA,¹ who excelled in the same kind of poetry, and five times carried the prize against him in the public disputes. She was surnamed the *Lyric Muse*.

Alexander the Great, when he ruined the city of Thebes, the country of our illustrious poet, long after his death, paid a just and glorious homage to his merit in the persons of his descendants, whom he distinguished from the rest of the inhabitants of that unfortunate place, by ordering particular care to be taken of them.²

I have spoken elsewhere of some of Pindar's

works, in the history of Hiero: the reader may consult the passage, vol. I. p. 381.

SECT. VI.

Of the Elegiac poets.

Elegy, according to Didymus, is derived from *ἰ λῆγναι*, to say, *ah! ah! or alas!* And according to others, from *ἰλναι λῆγναι*, to say *moving things*. The Greeks, and after them the Latins, composed their plaintive poems, their elegies, in hexameter and pentameter verses. Hence every thing wrote in those verses has been called elegy, whether the subject be gay or sad.

Versibus impariter junctis querimonia primum,
Mox etiam inclusa est: voti sententia compos.

Horat. in Art. Poet.

Grief did at first soft elegy employ,
That now oft dries her tears, to sing of joy.

No Greek elegy of the first sort is come down to us, except that inserted by Euripides in his *Andromache*, which consists only of fourteen lines. The inventor of this kind of poetry is not known.

Quis tamen exiguo elegos emisit auctor,
Grammatici certant, et adhuc sub judice lis est.

Idid.

Yet who first sigh'd in elegiac strain,
The learn'd still doubt, and still contest in vain.

As it was intended at its institution for tears and laments, it was employed at first only in grief and misfortune. It expressed no other sentiments, it breathed no other accents but those of sorrow. With the negligence natural to affliction and distress, it sought less to please than to move; and aimed at exciting pity, not admiration. It was afterwards used on all sorts of subjects, and especially the passion of love. It however always retained the character peculiar to it, and did not lose sight of its original design. Its thoughts were always natural and far from the affectation of wit; its sentiments tender and delicate, its expression simple and easy, always retaining that alternate inequality of measure, which Ovid makes so great a merit in it (*In pedibus vitium causa decoris erat*) and which gives the elegiac poetry of the ancients so much the advantage over ours.

Periander, Pittacus, Solon, Chilo, and Hippias wrote their precepts of religion, morality and policy, in elegiac verse, in which Theognis of Megara, and Phocylides, imitated them. Many of the poets also, of whom I have spoken before, composed elegies: but I shall say nothing here

¹ Elian. l. xiii. c. 25.

² Plut. in Alex. p. 672.

of any but those who applied themselves particularly to this kind of poetry, and shall make choice only of a small number of them.

CALLINUS. He was of Ephesus, and is one of the most ancient of the elegiac poets. It is believed that he flourished about the beginning of the Olympiads, A. M. 3230.

MIMNERMUS, of Colophon, or Smyrna, was cotemporary with Solon, A. M. 3408. Some make him the inventor of elegiac verse. He at least gave it its perfection, and was perhaps the first who transferred it from funerals to love. The fragments of his which are come down to us, breathe nothing but pleasure, whence Horace says of him,

Si, Mimnermus uti censeat, sine amore Jocique
Nil est jucundum, vivas in amore Jocique.

Horat. l. i. Epist. 6.

As Mimnermus thinks,

If without love and pleasure nought is joy,
In love and pleasure life's swift hours employ.

SIMONIDES, whose verses were so pathetic, might be ranked among the elegiac poets: but I have given him a place elsewhere.

PHILETAS of Cos, and **CALLIMACHUS** of Cyrene, lived both in the court of Ptolemy Philadelphus, A. M. 3724, whose preceptor Philetas certainly was, and Callimachus is believed to have been his librarian. The latter is considered as the principal author of elegiac poetry, and as the person who succeeded best in it: *Cujus (elegæ) princeps Callimachus; and Philetas as the next to him: Secundas, confessione plurimorum, Philetas occupavit.* This is Quintilian's opinion: but Horace seems to rank Mimnermus above Callimachus.

—Si plus adposcere vias,
Fit Mimnermus, et optivo cognomine crescit.

Epist. li. i. 2.

Call him Callimachus? If more his claim,
Mimnermus he shall be, his wish'd surname.

Callimachus had applied himself to every kind of literature.

SECT. VII.

Of the Epigrammatic Poets.

The epigram is a short kind of poem, susceptible of all subjects, which ought to conclude with a happy, sprightly, just thought. The word in Greek signifies *Inscription*. Those which the ancients placed upon tombs, statues,

temples, and triumphal arches, were sometimes in verse, but verse of the greatest simplicity of style. That name has since been confined to the species of poetry, of which I speak. The epigram generally consists of only a small number of lines: more extent, however, is sometimes given it.

I have said that this kind of poem is susceptible of all kinds of subjects. This is true, provided care be taken to exclude all calumny and obscenity from it.

The liberty, which the comic poets gave themselves at Athens, of attacking the most considerable and most worthy of the citizens without reserve, made way for a law⁴ to prohibit the mangling of any body's reputation in verse. At Rome, amongst the laws of the twelve tables, which very rarely condemned to death, there was one, that made it capital for any body to defame a citizen in verse.⁵ Cicero's reason is no less just than remarkable. "This law," says he, "was wisely instituted. There are tribunals, to which we may be cited to answer for our conduct before the magistrates: our reputation, therefore, ought not to be abandoned to the malicious wit of the poets, nor scandalous accusations suffered to be formed against us, without its being in our power to answer them, and defend ourselves before the judges." *Præclare. Judiciis enim ac magistratum disceptationibus legitimis propositam vitam, non poetarum ingenii, habere debemus; nec probum audire, nisi ea conditione, ut respondere liceat, et judicio defendere.*

The second exception, which regards purity of manners, is neither less important, nor less founded in reason. Our propensity to evil and vice is already but too natural and headstrong, and does not want any incentives from the charms and insinuations of delicate verses, the poison of which, concealed under the flowers of pleasing poetry, to borrow the terms which Martial applies to the Sirens,⁶ gives us a cruel

⁴ In vitium libertas excidit, et vim
Dignam lege regi: lex est accepta, chorusque
Turpiter obdicit. *Horat. in Art. Poet.*

Next comedy appeared with great applause,
Till her licentious and abusive tongue
Waken'd the magistrate's coercive power,
And forc'd it to suppress her insolence.

Roscommon.

⁵ Si mala conderit in quem quis carmina, jus est
Judiciumque.

Nostræ contra duodecim tabellæ, cum perpaucas res
capite sanxissent, in his hanc quoque sancendam puta-
verunt, si quis acitivisset, sive carmen condidisset quod
infamiam afferret, flagitiumve alteri. *Cic. de Rep. l. iv.*
apud S. August. l. i. c. 9. c. 10.

⁶ Sirenas, hilarem navigantium pernam,
Blandasque mortes, gaudiumque crudele.

joy, and, by its enchanting sweetness, conveys disease and bane into the soul. The wisest legislators of antiquity always considered those, who abuse the art of poetry to such purposes, as the pests of society, as the enemies and corrupters of mankind, that ought to be abhorred, and kept under with the highest marks of infamy and disgrace. Such wise laws had not the good effect to be hoped from them, especially in respect to the epigram, which of all the species of poetry has abandoned itself most to obscenity.

In observing the two rules I have now laid down, epigrams would not have been dangerous, in respect to manners, and might have been useful as to style, by throwing into it occasionally and with discretion those agreeable, lively, quaint thoughts, which we find at the end of good epigrams. But, what in its origin was beauty, delicacy, and vivacity of wit, (which is properly what the Latins understand by the words, *acutus*, *acumen*,) soon degenerated into a vicious affectation, that extended even to prose, of which it became the fashion studiously to conclude almost all the phrases and periods with a glittering thought, in the nature of a point. We shall have occasion to expatiate farther upon that head.

F. Vavaseur the Jesuit has treated the subject we are upon more at large, in the no less learned than elegant preface to the three books of epigrams, which he has given the public. There are also useful reflections upon the same subject in the book, called *Epigrammatum Delectus*.

We have a collection of Greek epigrams called *Anthologia*.

MELEAGER, a native of Gadara a city of Syria, who lived in the reign of Seleucus the last king of that realm, made the first collection of Greek epigrams, which he called *Anthologia*, because as he had chosen the brightest and most florid epigrams of forty-six ancient poets, he considered his collection as a nosegay, and denominated each of these poets after some flower, Anytus the lily, Sappho the rose, &c. After him PHILIP of Thessalonica made a second collection, in the time of the emperor Augustus, out of only fourteen poets. AGATHIAS made a third, about five hundred years after, in the reign of the emperor Justinian. PLANODES, a monk of Constantinople, who lived in the year 1380, made the fourth and last, which he divided into seven books, in each of which the epigrams are disposed in an alphabetical order according to their subjects. This is the *Anthologia* come down to us. He retrenched many obscene epigrams, for which some of the learned are not a little angry with him. There are a great many epigrams in this collection, that abound with wit and sense; but more of a different character.

ARTICLE II.

Of the Latin Poets.

Poetry, as well as the other polite arts, did not find access till very late among the Romans, solely engrossed as they were during more than five hundred years by military views and expeditions, and void of taste for every thing called literature. By a new kind of victory, Greece, when conquered and reduced, subdued the victors in her turn, and exercised over them a power the more glorious, as it was the result of their will, and was founded upon a superiority of knowledge and science no sooner known than homaged. That learned and polite nation, which was under the necessity of a strict commerce with the Romans, by degrees made them lose that air of rudeness and rusticity they still retained from their ancient origin, and inspired them with a taste for the arts that civilize, improve, and adorn society.

Græcia capta ferum victorem cepit, et artes
Intulit agresti Latio. 1 Sic horidus ille
Deſuxit numerus Saturnius, et grave virus
Munditiæ populære. Horat. Epist. l. 1. 2.

Greece conquer'd won her martial victors' hearts,
And polish'd rustic Latium with her arts;
The rude hoarse strain expir'd of Saturn's days,
And the muse soften'd and refin'd our lays.

This happy change began by poetry, whose principal view is to please, and whose charms, full of sweetness and delight, impart a taste for themselves soonest and with most ease. It was however very gross and unpollished in its beginning at Rome; and had its birth in the theatre, or at least began there to assume a more graceful and elegant air. It made its first essays in comedy, tragedy, and satire, which it carried slowly and by insensible acquisitions to a great degree of perfection.

When the Romans had been almost four hundred years without any dramatic games, chance and debauch introduced the Fescennine verses¹ into one of their feasts, which served them instead of theatrical pieces near an hundred and twenty years. These verses were rude and almost void of numbers, as they were extemporaneous, and made by a rustic illiterate people, who knew no other masters but mirth

1 Horace here gives us the time when poetry began to improve among the Latins; for it was known in Italy very early, *numerus Saturnius*; and as Horace tells us again in the same epistle, at Rome in the time of Numa: *Sallare Numa carmen*.

2 These verses were so called from Fescennia, a city of Etruria, whence they were brought to Rome.

and wine. They consisted of gross rallery, attended with postures and dances.

*Fescennina per hunc inventa licentia morem
Versibus alternis opprobria rustica fudit.*

Horat. Epist. l. i. ii.

Fescennia's license thus found out, the swains
Vented their taunts in rude alternate strains.

To these loose and irregular verses soon succeeded a chaster kind of poetry, which, though it also abounded with pleasant ridicule, had nothing viciously indecent in it.³ This poem appeared under the name of Satyr (*Satura*,) from its variety, and had regular measures, that is to say, regular music and dances: but obscene postures were banished from it. These satyrs were innocent farces, in which the spectators and actors were indifferently made the objects of mirth.

Livius Andronicus found things in this state, when he conceived the design of making comedies and tragedies in imitation of the Greeks.⁴ Other poets followed his example, copying after the same originals: of these were Nævius, Ennius, Cæcilius, Pacuvius, Accius, and Plautus. These seven poets, of whom I am going to speak, lived almost all of them at the same time in the space of sixty years.

In what I propose to say here of the Latin poets, I shall not follow the order of the subject, as I have done in speaking of the Greek poets, but the order of time, which seemed to me the most proper for showing the birth, progress, perfection, and decline of the Latin poetry.

I shall divide the whole time into three different ages. The first will consist of about two hundred years, during which Latin poetry had its birth, was improved, and gradually acquired strength. Its second age will consist of about an hundred years, from Julius Cæsar to the middle of Tiberius's reign, in which it attained its highest degree of perfection. The third age will contain the subsequent years, wherein, by a sufficiently rapid decline, it fell from that flourishing state, and at length entirely degenerated from its ancient reputation.

SECT. I.

First Age of Latin Poetry.

LIVIVS ANDRONICUS.

The poet Andronicus took the prænomen of Livius, because he had been set at liberty by M.

Livius Salinator, whose daughters he had instructed.⁵ He represented his first tragedy, A. M. 376, a year before the birth of Ennius, the first year after the first Punic war, and the 514th of Rome, in the consulship of C. Claudius Cento and M. Sempronius Tuditanus; ⁶ about an hundred and sixty years after the death of Sophocles and Euripides, fifty after that of Menander, and two hundred and twenty before that of Virgil.

CN. NÆVIUS.

Nævius, according to Varro, had served in the first Punic war, A. M. 3769. Encouraged by the example of Andronicus, he trod in his steps, and five years after him, began to give the public theatrical pieces: these were comedies.⁷ He drew upon himself the hatred of the nobility, and especially of one Metellus; which obliged him to quit Rome. He retired to Utica, where he died.⁸ He had composed the history of the first Punic war in verse.

Q. ENNIUS;

He was born at Rudimæ a city of Calabria, A. M. 3764, in the 514th or 515th year of Rome, and lived to the age of forty in Sardinia.⁹ It was there he became acquainted with Cato the Censor, who learned the Greek language of him at a very advanced age, and afterwards carried him to Rome, as M. Fulvius Nobilior afterwards did to Ætolia. The son of this Nobilior caused the freedom of Rome to be granted him, which in those times was a very considerable honour. He had composed the annals of Rome in heroic verse, and was at the twelfth book of that work in his sixty-seventh year.¹⁰ He had also celebrated the victories of the first Scipio Africanus, with whom he had contracted a particular friendship, and who always treated him with the highest marks of esteem and consideration.¹¹ Some even believe that he gave his image a place in the tomb of the Scipios. He died in the seventieth year of his age. Scipio was well assured, that the memory of his great actions would subsist as long as Rome, and as Africa continued in subjection to Italy: but he also believed, that the writings of Ennius were highly capable of augmenting their splendour,

⁵ Euseb. in Chron.

⁶ Cic. in Brut. n. 72. Aul. Gell. l. xvii. c. 21.

⁷ Aul. Gell. *Ibid.*

⁸ Euseb. in Chron.

⁹ Aurel. Vic. de Vir. Illust. c. 47. l. Tus. n. 3.

¹⁰ Aul. Gell. l. xvii. c. 21.

¹¹ Carus fuit Africano superiori noster Ennius. Itaque etiam in sepulchro Scipionum putatur esse constitutus. Cic. *pro Arch. Poet.* n. 22.

³ Liv. l. vii. n. 2.

⁴ *Ibid.*

and perpetuating their remembrance: 'a person whose glorious victories merited rather a Homer to celebrate them, than a poet whose style did but ill suit the grandeur of his actions!

It is easy to conceive, that the Latin poetry, in its infancy, and weak at the time we are speaking of, could not have much beauty and ornament. It sometimes showed force and genius, but without elegance and grace, and with great inequality. This Quintilian, where he draws Ennius's character, expresses by an admirable comparison. *Ennius sicut sacros vetustate lucos adoremus, in quibus grandia et antiqua robora jam non tantam habent speciem, quantam religionem.* "Let us reverence Ennius," says he, "as we do those groves, which time hath consecrated and made venerable, and of which the great and ancient oaks do not strike us so much with their beauty, as with a kind of religious veneration."

Cicero in his treatise upon old age, relates a fact which ought to do Ennius's memory abundance of honour. He says, "that poet at the age of seventy, carried the two loads, which are commonly thought the hardest to bear, poverty and old age, not only with such constancy but gaiety, that it might almost be said he took delight in them."

CÆCILIUS. PACUVIUS

These two poets lived in the time of Ennius, both, however, younger than him. The first, according to some, was a native of Milan, a comic poet, and at first lived with Ennius. Pacuvius, Ennius's nephew, was of Brundisium. He professed both poetry and painting, which have always been deemed sister arts; and distinguished himself particularly in tragic poetry.¹ Though they lived in the time of Lælius and Scipio, that is to say at a time, to which the purity of language as well as manners seem singularly attached, their diction carries no air of so happy an age.⁴

1 Non incendia Carthaginiis impio
Ejus, qui domita nomen ab Africa
Lucratus rediit, clarius indicant
Laudes, quam Calabre Pierides.—*Hor. od. viii. l. 4.*

Not impious Carthage burnt does more,
Than the Calabrian muse, proclaim
The hero's glory, who of yore
From conquer'd Afric took his name.

2 Annos septuaginta natus, (tot enim vixit Ennius) ita ferebat duo, quæ maxima putantur onera, paupertatem et senectutem, ut eis penè delectari videretur. *De Senect. n. 14.*

3 Euseb. in Chron. *Ætatis illius leta fuit laus, tanquam innocentie, sic Latine loquendi. Non omnium tamen: nam illorum aequales Cæcilius et Pacuvius male locutos videmus. Cic. in Brut. n. 258.*

Lælius, however, one of the persons whom Cicero introduces in his dialogue upon friendship, in speaking of Pacuvius as of his particular friend says, that the people received one of his plays called *Orestes* with uncommon applause, especially the scene where Pylades declares himself to be Orestes to the king, in order to save his friend's life, and the latter affirms himself to be the true Orestes. It is not impossible but that the beauty and spirit of the sentiments might on this occasion make the audience forget the want of justness and delicacy of expressions.⁵

ATTIUS.

L. Attius or Accius, for his name is written both ways, was the son of a freedman: *A. M. 3864.* He exhibited some tragedies in the time of Pacuvius, though almost fifty years younger than him.⁶ We are told that some of them were performed in the edileship of the celebrated P. Licinius Crassus Mucianus, in whose person five of the greatest advantages that could be possessed, are said to have been united: 'great riches, illustrious birth, supreme eloquence, profound knowledge of the law, with the office of great pontiff: [*Pontifex maximus.*]'⁷

This poet lived in great friendship with D. Junius Brutus, who first carried the Roman arms in Spain as far as the ocean.⁸ Accius composed verses in honour of him, with which that general adorned the porch of a temple, that he built with the spoils taken from the enemy.

PLAUTUS.

Plautus (*M. Accius*) was of Salinæ, a city of Umbria in Italy (in Romagnia).⁹ He acquired great reputation at Rome by his comedies, at the same time with the three last poets mentioned above. Aulus Gellius tells us, after Varro, that Plautus applied himself to merchandise, and that having lost all he had in it, he was obliged for the means of life to serve a baker, in whose house he turned a corn-mill.

Of all the poets who appeared till him, only some fragments remain. Plautus has been

5 Qui clamores tota caeca nuper in hospitibus mei et amici M. Pacuvii nova fabula, cum ignorante rege, uter esset Orestes, Pylades Orestem se esse diceret, ut pro illo necaretur; Orestes autem, ita ut erat, Orestem se esse perseveraret. Stantes plaudabant in re facta: quid arbitremur in vera facturos fuisse? *De Amicit. n. 24.*

6 Euseb. in Chron. 7 Aul. Gell. l. i. c. 1.
8 Ditissimus, nobilissimus, eloquentissimus, jurisconsultissimus, Pontifex maximus.

9 Val. Max. l. viii. c. 14.
10 Aul. Gell. l. iii. c. 3.

more fortunate, nineteen of whose comedies have escaped the injuries of time, and come down almost entire to us. It is very probable, that his works preserved themselves better than others, because as they were more agreeable to the public, the demand for them was greater and more permanent. They were not only acted in the time of Augustus, but from a passage in Arnobius¹¹ it appears, that they continued to be played in the reign of Dioclesian, three hundred years after the birth of Jesus Christ.

Various judgments have been passed on this poet. His elocution seems to be generally approved, without doubt in regard to the purity, propriety, energy, abundance, and even elegance of his style. Varro says, that if the muses were to speak Latin, they would borrow the language of Plautus: *licet Varro dicat musas—Plautino sermone locuturas fuisse, si Latine loqui vellent.*¹² Such a praise makes no exceptions, and leaves us nothing to desire. Aulus Gellius¹³ speaks of him no less to his advantage: *Plautus, homo lingue atque elegantie in verbis Latina princeps.* Horace, who was undoubtedly a good judge in this point, does not seem so favourable to Plautus. The whole passage is as follows:

At nostri proavi Plautinos et numeros, et
Laudavere sales; nimium patienter utrumque,
Ne dicam stultè, mirati; si modo ego et vos
Scimus inurbanum lepido seponere dicto,
Legitimamque sonum digito callemus, et aure.

Horat. in Art. Poet.

"Our ancestors," said he to the Pisos, "practised and admired the verses and raillery of Plautus with too much indulgence, not to call it stupidity; if it be true, that either you or I know how to distinguish delicate, from gross, raillery, and have ears to judge aright of the numbers and harmony of verse." This criticism seems the more against Plautus, as it argues, that Horace was not alone in his opinion, and that the court of Augustus had no greater taste than him, either for the versification, or pleasantries of that poet. Horace's censure falls upon two articles; the numbers and harmony of his verses, *numeros*; and his raillery, *sales*. For my part I believe it indispensably right to adopt his judgment in a great measure. But it is not impossible that Horace, offended at the unjust preference given by his age to the ancient Latin poets against those of their own times, may have been a little too hypercritical upon some occasions, and on this in particular. It is certain that Plautus was not exact in his verses, which for that reason

he calls *numeros innumeros*, numbers without number, in the epitaph he made for himself. He did not confine himself to observing the same measure, and has jumbled so many different kinds of verse together, that the most learned find it difficult to distinguish them. It is no less certain that he has flat, low, and often extravagant pleasantries; but at the same time he has such as are fine and delicate. Cicero for this reason, who was no bad judge of what the ancients called *Urbanity*, proposes him as a model for raillery.¹⁴

These faults of Plautus therefore do not hinder his being an excellent comic poet. They are very happily atoned for by many fine qualities, which may not only make him equal, but perhaps superior to Terence. This is Madam Dacier's judgment, (then Mademoiselle Le Fevre) in her comparison of these two poets.¹⁵ "Terence," says she, "has undoubtedly most art, but the other most wit: Terence makes more be said than done, Plautus more done than said; which latter is the true character of comedy, that consists much more in action than discourse. This busy vivacity seems to include a farther considerable advantage on the side of Plautus: that is, his intrigues are always adapted to the character of his actor, whilst his incidents are well varied, and are never without something that surprises agreeably; whereas the stage seems sometimes to stand still in Terence, in whom the vivacity of the action, and the incidents and intrigues that form the plot, are manifestly defective." This is Cæsar's reproach of him in some verses, which I shall repeat when I come to speak of Terence.

To give the reader some idea of the style, Latinity, and antiquated language of Plautus, I shall transcribe in this place the beginning of the prologue of Amphitryon, one of his finest plays. It is spoken by Mercury.

Ut vos in vestris vultis mercimoniis
Emundis vendundisque me letum lucris
Afficere, atque adjuvare in rebus omnibus:
Et ut res rationesque vestrorum omnium
Bene expedire vultis pergrege et domi,
Bonoque atque amplo auctare perpetuo lucro
Quasque incerpistis res, quasque inceptabilis:
Et uti bonis vos vestrosque omnis nuntius
Me afficere vultis; ea afferam, eaque ut nuntiem,
Quæ maximè in rem vestram communem sient:
(Nam vos quidem id jam acitis concessum et datum
Mi esse ab diis aliis, nuntiis præsim et lucro:)

14 Duplex omnino est jocandi genus: unum libérale, petulans, flagitiosum, obscenum; alterum elegans, urbanum, ingeniosum, facetum; quo genere non modò Plautus noster, et Atticorum antiqua comœdia, sed etiam philosophorum Socraticorum libri sunt referti. Lib. I. de offic. n. 104.

15 Preface to the translation of three comedies of Plautus.

¹¹ Arnob. l. vii.

¹² Quintil. l. x. c. 1.

¹³ Aul. Gell. l. vii. c. 17.

Hæc ut me vultis approbare, annitier
 Lucrum ut perenne vobis semper suppetat :
 Ita huic facietis fabule silentium,
 Itaque æqui et justi hic eritis omnes arbitri.

To understand these verses, we must remember that Mercury was the god of merchants, and the messenger of the gods. "As you desire me to be propitious to you in your bargains and sales; as you desire to prosper in your affairs at home and abroad, and to see a considerable profit continually augment your present and future fortunes and undertakings; as you desire that I should be the bearer of good news to yourselves and your families, and bring you such advices as are most for the benefit of your commonwealth, (for you know that by the consent of the other gods I preside over news and gain;) as you desire that I should grant you all these things, and that your gains may be as lasting as your occasions; so you will now afford this play your favourable attention, and show yourselves just and equitable in your judgment of it."

We often meet with fine maxims in Plautus for the conduct of life, and regulation of manners; of which I shall give one example from the play just cited. It is a speech of Alcmena's to her husband Amphitryon, which in a few lines includes all the duties of a wise and virtuous wife.

Non ego illam mihi dotem duco esse, quæ dos dicitur :
 Sed pudicitiam, et pudorem, et sedatum cupidinem,
 Deum metum, parentum amorem, et cognatum concor-
 diam :

Tibi morigera, atque ut munifica sis bonis, proxima probis.

Act II. scene 2.

"I do not esteem that a dowry, which is commonly called so: but honour, modesty, desires subjected to reason, the fear of the gods, the love of our parents, unity with our relations; obedience to you, munificence to the deserving, and to be useful to the just."

But for some passages of this kind, how many has he that are contrary to decency and purity of manners! It is great pity that this reproach should extend almost generally to the best poets of the pagan world. What Quintilian says¹ of certain dangerous poems, may be well applied on this occasion: That youth should, if possible, be kept entirely ignorant of them, or at least that they should be reserved for riper years, and a time of life less liable to corruption: *Amoveantur, si fieri potest; si minus, certe ad firmitus ætatis robur reserventur*—*cum mores in tuto fuerint.*

¹ L. l. c. 9.

TERENCE.

TERENCE was born at Carthage after the second Punic war, in the 56th year of Rome, A. M. 3818. He was a slave to Terentius Lucanus a Roman senator, who upon account of his wit, not only caused him to be educated with great care, but gave him his liberty whilst very young. It was this senator from whom our poet took the name of Terence; such as were made free usually assuming the names of the masters that set them at liberty. He was much beloved and esteemed by the principal persons of Rome, and lived in particular intimacy with Lælius and Scipio Africanus, who took and demolished Numantia. The latter was eleven years younger than him.

Six of Terence's comedies have come down to us. When he sold the first to the ediles, it was thought proper that he should read it beforehand to Cæcilius, a comic poet as well as himself, and in great esteem at Rome, when Terence first appeared there. Accordingly he went to his house, and found him at table. He was brought in, and as he was very ill dressed, a stool was given him near Cæcilius's bed, where he sat down and began to read. He had no sooner read some few verses, than Cæcilius invited him to supper, and placed him at table near himself. Judgments are not always to be formed of men by their outsides. A bad dress may often cover the most excellent talents.

The Eunuch, one of the six comedies of Terence, was received with such applause, that it was acted twice the same day, morning and evening, which perhaps had never happened to any play before; and a much better price was given for it than had ever been paid for any comedy till then: for Terence got eight thousand sesterces, or about fifty pounds.

It was publicly enough reported, that Scipio and Lælius assisted him in the composition of his plays, which rumour he augmented himself by denying it but faintly, as he does in the prologue to the *Adelphi*, the last of his comedies. "As to what those envious persons say, that he is assisted in composing his works by some illustrious persons, he is so far from taking that as the offence they intended it, that he conceives it the highest praise which could be given him, as it is a proof, that he has the honour to please those, who please this audience and the whole Roman people; and who in peace, in war, and on all occasions, have rendered the commonwealth in general, and every one in particular, the highest and most important services, with-

² Suet. in vit. Terent.

out being either more distant or more haughty upon that account."

We may believe, however, that he only denied this assistance so negligently, to make his court to Lælius and Scipio, to whom he knew such a conduct would not be disagreeable. That report notwithstanding, says Suetonius in the Life of Terence ascribed to him, augmented continually, and is come down to our times. The poet Valgius, who was Horace's cotemporary, says positively in speaking of Terence's comedies:—

*Hæ quæ vocantur fabulæ, cujus sunt?
Non hæ, qui jura popullis, recensens 3 dabat
Honore summo affectus fecit fabulas?*

"And pray, whose are these same comedies? Are they not his, who, after having acquired the highest glory, gave laws, and governed the people with power and authority?"

Whether Terence was for putting an end to the reproach of publishing the works of others as his own, or had formed the design of going to learn the customs and manners of the Greeks perfectly, in order to represent them the better in his plays; after having composed the six comedies still extant, and before he was thirty-five years old, he quitted Rome, where he was never seen more. Some say that he died at sea in his return from Greece, whence he brought with him an hundred and eight plays, which he had translated from Menander. Others assure us, that he died at the city of Stymphalus in Arcadia, in the consulship of Cn. Cornelius Dolabella and M. Fulvius, of a disease occasioned by his grief for having lost the comedies he had translated, and those he had made himself.

Terence had only one daughter, who, after his death, was married to a Roman knight, and to whom he left a house and garden of twenty acres upon the Applan way.

Cicero, in a copy of verses entitled *Aurea*, which signifies a meadow, says of Terence:

*Tu quoque, qui solus lecto sermone, Terenti,
Conversum expressumque Latina voce Menandrum
In medio populi sedatis vocibus effers,
Quidquid come loquens, atque omnia dulcia linquens.*

That is, "And you, Terence, who alone translates Menander with so much eloquence, and makes him speak the language of the Romans so happily, in your judicious choice of whatever is sweetest and most delicate in it." This testimony is for the honour of Terence; but the verses that express it, not much for Cicero's.

I now proceed to those of Cæsar, which I mentioned before. That great man, who wrote with so much force and accuracy, and had himself composed a Greek tragedy, called (Edipus, says, addressing himself to Terence:

*Tu quoque, tu in summis, ô dimidiata Menander,
Poneris, et meritò, puri sermonis amator.
Lenibus atque utinam scriptis adjuncta foret vis
Comica, ut æquato virtus polleret honore
Cum Græcia, neque in hac despectus parte jaceres:
Unum hoc maceror, et doleo tibi deesse, Terenti.*

"Thou also, Menander's half, art ranked in the number of the greatest poets, and deservedly, for the purity of thy style. And I wish thy sweet writings had in them the comic force and spirit, that thy merit might have ranked thee with the Greeks, and that thou wert not so much below them in that point! But this, Terence, is unhappily what you want, and I much regret."

Terence's great talent consists in the inimitable art of expressing the manners, and copying nature with so genuine and unstudied a simplicity, that every body believes himself capable of writing in the same manner; and at the same time with such elegance and ingenuity, as nobody has ever been able to come up to. Hence it is from this talent, this wonderful art diffused throughout the comedies of Terence, which charms and transports without notice, or any glitter of ornaments, that Horace characterizes him.

*Vincere Cæcilius gravitate, Terentius arte [dicitur.]
Ep. i. l. 2.*

Terence with an extreme purity of speech and a simple and natural style, unites all the graces and delicacy, of which his language was susceptible; and of all the Latin authors has come the nearest to Atticism, or to whatever is considered the finest, most exquisite, and most perfect among the Greeks.⁴ Quintilian, in speaking of Terence, of whom he only says, that his writings were highly elegant, observes, that the Roman language rendered but very imperfectly that refinement of taste, that inimitable grace, peculiar to the Greeks, and even to be found only in the Attic dialect. *Vir levem consequimur umbram, adeo ut mihi sermo ipse Romanus non recipere videatur illam solis concessam Atticis venerem, quando eam ne Græci quidem in alio genere lingue obtinuerint.* It is a pity that the subject of his comedies makes them dangerous to youth; upon which I have treated at large in my books upon studying polite learning.

³ I do not know what this word means here, and believe it some error crept into the passage.

⁴ Terentii scripta sunt in hoc genere elegantissima.

LUCILIUS.

Lucilius, (*Caius Lucilius*) a Roman knight, was born at Suessa, a town of Campania, in the 158th Olympiad, A. M. 3656, and the 605th year of Rome, when Pacuvius the tragic poet flourished.¹ He is said to have carried arms under the second Scipio Africanus at the siege of Numantia: but as he was then but fifteen years old, this circumstance is dubious. He had a great share in that famous general's friendship, as well as in that of Lælius. He was their companion in the innocent sports and amusements, to which they did not disdain to descend, and in which those great men, at their hours of leisure, endeavoured to unbend themselves after their serious and important occupations: an admirable simplicity in persons of their rank and gravity!

Quin ubi se à vulgo et scena in secreta remorant
Virtus Scipiadae, et mitis sapientia Læli,
Nugari cum illo, et discincti ludere, donec
Decqueretur olus, soliti. *Hor. Sat. i. l. 2.*

With him, retir'd from crowds and state at home,
Wise gentle Lælius, and the pride of Rome,
Scipio, 'twixt play and trifle, liv'd in jost,
Till herbs, the frugal meal, and roots were drest.

Lucilius passes for the inventor of satire, because he gave it its last form, the same in which Horace, Persius, and Juvenal, have followed him. Ennius, however, had set him the example before, as Horace himself confesses by these verses, in which he compares Lucilius to Ennius.

—Fuerit Lucilius, inquam,
Comis et urbanus; fuerit limator idem,
Quam rudis et Græcis intacti carminis auctor.

But the satires of Ennius,² though like those of Lucilius and Horace in other respects, differed from them in form as they consisted of several different kinds of verse.

The new form which Lucilius gave satire, as I have said before, made Horace and Quintilian consider him as the inventor of that species of poetry; to which title he has a just claim.³

¹ Euseb. in Chron. Vell. Patere. l. ii. c. 9.

² Olim carmen, quod ex variis poematibus constabat, SATYRA dicebatur, quale scripserunt Pacuvius et Ennius. *Diomed. Grammat.*

Satira, cibi genus, ex variis rebus conditum. *Festus.*

³ ————Quid cum est Lucilius ausus

Primum in hunc operis componere carmina morem.

Sat. i. l. 2.

Satira quidem tota nostra est, in qua primum insignem laudem adeptus est Lucilius. *Quintil. l. x. c. i.*

There was another kind of satire, which derived itself also from the ancient.⁴ It is called the Varronian or Menippean satire; because Varro, the most learned of the Romans, was its author, imitating in that work the Cynic philosopher Menippus of Gadara. This species of satire was not only composed of several kinds of verses, but Varro introduced prose into it, in which there was, besides, a mixture of Greek and Latin. The work of Petronius, that of Seneca, upon the death of Claudius, and of Boetius upon the consolation of philosophy, are all satires of the same kind with this of Varro. But to return to my subject.

Lucilius composed thirty books of satires, in which he censured many persons of bad lives by name and in a very offensive manner, as Horace informs us, regarding only virtue, and the lovers of virtue.

Primos populi arripuit, populumque tributum,
Scilicet uni æquus virtuti, atque ejus amicis.

Sat. i. l. 2.

His pen made the conscious bad tremble, as if
he had pursued them sword in hand:—

Ense velut stricto, quoties Lucilius ardens
Infremuit, rubet auditor cui frigida mens est
Criminibus, tacita sudant præcordia culpa.

Juven. Sat. i.

Lucilius⁵ used to say that he desired his readers might neither be very ignorant nor very learned. The one saw too little, and the other too much. The one did not know what was good, and consequently no justice was to be expected from them; and what was imperfect could not be concealed from the penetration of the others.

It is not probable that he died at forty-six years of age, as some assure us. Horace calls him old man, where he says Lucilius confided all his secrets, and whatever had happened to him in life, to his books, as to faithful friends.

Ille velut fides arcam sodalibus olim
Credebat libris: neque, si malè gesserat usquam,
Decurrens aliò, neque si bene. Quo fit ut omnis
Votiva pateat veluti descripta tabella
Vita senis.

Sat. i. l. 2.

Pompey was grandson, or rather grand-nephew, to Lucilius, by the mother's side.

⁴ Alterum illud est et prius Satyræ genus, quod non sola carminum varietate condidit Terentius Varro, vir Romanorum eruditissimus. *Quintil. l. x. c. i.*

⁵ Caius Lucilius, homo doctus et perurbanus, dicere solebat, ea quæ scriberet neque ab indoctissimis, neque ab doctissimis legi velle: quod alteri nihil intelligerent, alteri plus fortasse quam de se ipse. *De Orat. l. ii. n. 22.*

Of all his works, only some fragments of his satires have come down to us.

The reputation of this poet was very great during his life, and subsisted long after his death to such a height, that in Quintilian's time, he continued to have admirers so zealous, as to prefer him not only to all who had wrote in the same way, but to all the poets of antiquity in general.⁶ Horace judged very differently of him.⁷ He represents him to us indeed as a poet of a fine taste, and delicate in his raillery, *facetus, emuncta naris*: but hard and stiff in his compositions; not being able to take the pains necessary towards writing well; for to write much, was his great fault. He was highly satisfied with himself, and believed he had done wonders, when he had dictated two hundred verses in less time than one could throw them together on paper. In a word, Horace compares him to a river, that with a great deal of mud, carries, however, a precious sand along with it in its current.

The judgment Horace⁸ passed upon Lucilius, occasioned great clamour at Rome. The admirers of the latter, enraged at his having presumed to treat their favourite in that manner, gave out, that Horace had dispraised Lucilius out of envy only, and with the view of setting himself above him. We ought not to be angry with them on account of these complaints, how unjust soever they might be: for they were the means of drawing forth an excellent satire, wherein Horace, in rendering Lucilius all the justice he deserved, sustains and confirms the judgment he had passed on him by the most solid proofs.

For Quintilian's honour, I am sorry that a critic of his profound judgment and just taste, should differ in opinion with Horace in this point. He cannot forgive him for having compared the writings of Lucilius to muddy waters, from which, however, something valuable might be extracted; "For my part," says he, "I find surprising erudition and a noble liberty in him, which gave his works poignancy with abundance of salt."⁹ Horace allows him the last qualities, which did not prevent Lucilius from having abundance of vicious passages in him, that ought either to have been amended, or retrenched. As to erudition, Quintilian differs directly in that respect with Cicero's opinion. For says the latter, speaking of Lucilius: "His works are light and frothy, and with exceeding

pleasantry have no great erudition."¹⁰ To conclude, we can form at present no proper judgment of a poet, of whose works almost nothing has come down to us.

SECT. II.

Second Age of Latin Poetry.

The interval of which I am now to speak, continued from the time of Julius Cæsar to the middle of Tiberius' reign, and included about an hundred years. It was always considered as the golden age of polite learning, during which a crowd of fine geniuses of every kind, poets, historians, and orators, carried Rome's glory to its greatest height. Literature had before made great efforts, and one may also say great progress: but it had not yet attained that degree of maturity, which constitutes perfection in arts. Writings did not want good sense, judgment, solidity, and force; but they had little art, less ornament, and no delicacy. A small number of persons of great talents, rising up together in a space of time of no great duration, on a sudden, and as if inspired, by adding to the excellent qualities of their predecessors, others which they had wanted, established good taste of every kind irrevocably and for evermore; so that as soon as the world began to lose sight of those perfect models, every thing immediately began to decline and degenerate.

The happy beginnings which we have related, prepared the way for the wonders that succeeded them; and as Rome derived her first notions of polite learning from Greece, so it was by her industrious perseverance in studying the Greek writers, that the Romans attained perfection. The first poets, and especially the Tragic and Comic, contented themselves with translating the works of the Greeks.

Tentavit quoque, rem si dignè vertere posset,
Et placuit sibi. *Horat. Epist. l. i. 2.*

Essay'd to make it speak our tongue with grace,
And pleas'd themselves.

They afterwards took a farther step. They ventured to soar with their own wings, and composed originals entirely Roman.

Nil intentatum nostri liquere poetæ,
Nec minimum meruere decus, vestigia Græcæ
Ausî deserere, et celebrare domestica facta;
Vel qui Prætextas, vel qui docuere Togatas.

Id. de Art. Poet.

⁶ Lucilius quosdam ita deditos sibi adhuc habet amatores, ut eum non ejusdem modo operis auctoribus, sed omnibus poetis præferre non dubitent. *Quintill. l. x. c. l.*

⁷ Sat. iv. l. i.

⁸ Sat. x. l. i.

⁹ Nam et eruditio in eo mira, et libertas, atque inde acerbitas, et abundè salis. *Læb. x. c. l.*

¹⁰ Et sunt scripta illius (Lucillii) leviora, ut urbanitas summa appareat, doctrina mediocri. *Cic. de Fin. l. i. n. 7.*

Our authors have attempted every way,
And well deserve our praise, whose daring muse
Dadaid'd to be beholden to the Greeks,
And found fit subjects for her verse at home.

Roscommon.

Though the dramatic poets did not entirely succeed in these attempts, Horace did in lyric poetry. Rome, animated with a noble emulation, which arose from reading the Greek authors, and the esteem she had conceived for them, proposed to herself to equal, and even if possible, to surpass them: a very laudable and useful dispute between nations, and equally for their honour! Add to this first motive the admirable character of the persons at that time in supreme authority at Rome; the esteem for men of letters; the marks of distinction with which they were honoured; the solid rewards conferred on them; and the general respect paid to persons of singular merit of every kind; a respect which almost rose so high as to place them on an equality with the greatest and most powerful of the commonwealth. It has been the saying of all times, and cannot be too often repeated: emulation nourishes genius.¹ The view of merit in others, united with a just admiration for their excellent works, and a secret regret from the sense of our own inferiority, inspire an ardour for glory, to which nothing is impossible. And it is from these generous efforts, excited and sustained by the hopes of success, that arts attain their final perfection.

This is what happened, especially in the time of Augustus, in respect to poetry, history, and eloquence. But poetry is our subject in this place. I shall relate, in few words, the history of the poets who distinguished themselves most during this glorious age of Rome. Terence, of whom I have spoken above, may in my opinion be included in this class; who, though he preceded them in time, does not give place to them in merit. He is the first of the Latin poets, who seems in some measure to have set up the standard of perfection, and to have inspired others by his example with the desire and hope of attaining it.

AFRANIUS: (L. Afranius Quintianus.)

Afranius was much esteemed by the ancients. He excelled in the comedies called *Togatæ*² and *Atellanæ*.³ Horace seems to compare him with Menander.—

1 Alit æmulatione ingenia, et nunc invidia, nunc admiratio, incitationem accendit; naturaque, quod summo studio petium est, ascendit in summum. *Vell. Patern.* l. i. c. 7.

2 *Togatis* excellit Afranius. *Quintil.* l. x. c. 1.

3 These comedies were called *Atellanæ*, from *Atella*, a city of Campania, whence they were brought to Rome;

Dicitur Afrani toga convenisse Menandro.

In Art. Poet.

He was cotemporary with Terence, but much younger than him, and did not begin to grow in reputation till after his death. He ranked him above all other poets, and could not bear that any should be compared with him, of those who had wrote in the same way:—

Terentio non similem dices quenpiam. Fragm. Afrani.

He was highly esteemed for his poetical works, and no less condemned for the depravity of his manners.⁴

LUCRETIVS.

Lucretius (*Titus Lucretius Carus*) was born, according to the chronicle of Eusebius, in the second year of the 171st Olympiad, A. M. 3908, twelve years after Cicero, in the consulship of L. Licinius Crassus and Q. Mutius Scævola, in the 685th year of Rome. A philter, or love potion, had been given him that drove him deranged. He had some lucid intervals from his frenzy, during which he composed his six books—*De rerum natura*, wherein he explains at large the doctrine of Epicurus, of which we shall speak in its place. He inscribed his poem to C. Memmius, who had the same master, and without doubt, the same sentiments as himself. The same chronicle of Eusebius informs us, that this work was corrected by Cicero after its author's death. Cicero speaks of Lucretius only once, though he had often occasion to mention him, and the passage where he does so, besides being very obscure, is variously read. *Lucretii poemata, ut scribis, lita sunt*, (others read *non ita sunt*) *multis luminibus ingenii, multa tamen artis*.⁵

No man ever denied providence more boldly, or treated the Divinity with more insolence and presumption than this poet. He introduces his subject with this preface, in praise of Epicurus. "Whilst mankind," says he, "groaned in shameful subjection to the oppressive yoke of imperious religion, which declared itself descended from heaven, and made the whole earth tremble at the frowns and horrors of its aspect; a mortal native of Greece first boldly ventured to expose its falsehood to the eyes of men, and to declare against it, without the fame of the gods, the fear of thunders, or the rumbling noise of threatening skies, being able to awe or stop him. All those objects, on the contrary,

and *Togatæ*, because they represented only Roman actions and persons, implied by *Toga*, their peculiar habit.

⁴ *Quintil.* *ibid.* ⁵ *Cle. ad Quintil. Fr.* Ep. 11. l. ii.

only serve to exalt his courage, and confirm him in the design of being the first to force the barriers of nature, and to penetrate into her most mysterious secrets."

Humana ante oculos fœdè cum vita jaceret
In terris oppressa gravi sub religione;
Quæ caput à cœli regionibus ostendebat,
Horribili super aspectu mortalibus instans:
Primum Graius homo mortales tollere contra
Est oculos ausus, primusque obistere contra.
Quem nec fama deum, nec fulmina, nec minitanti
Murmure compressit cœlum: sed eo magis acrem
Irritat virtutem animi, confringere ut arcta
Naturæ primus portarum claustra cupiret.

Lucretius, throughout his whole work, lays down as a principle, that the gods neither regard nor interfere in any thing; and takes it upon him to explain the effects of nature, and the formation and conservation of the world, by the sole motion of atoms, and to refute those, who acknowledge the power and wisdom of a Divinity as the first cause of all things. The reader will be better acquainted with his opinions, when I come to explain those of his master Epicurus.

This poet has abundance of genius, force, and sublimity: but his verses are so very remote from the sweetness and harmony of Virgil's, that one would believe he had lived long before him.

CATULLUS.

Catullus (*Caius* or *Quintus Valerius Catullus*,) was born at Verona in the 66th year of Rome, A. M. 3916. The delicacy of his verses acquired him the friendship and esteem of the men of learning and wit, of whom there were then great numbers at Rome.

He wrote two satirical epigrams against Cæsar, in one of which he speaks of him with an air of haughtiness and contempt, that Quintilian justly treats as extravagant.

Nil nimium, Cæsar, studeo tibi velle placere;
Nec scire utrum sis ater an albus homo.

To please you, Cæsar, is not much my care;
Nor to know whether you are black or fair.

These verses, disrespectful as they were, only served the person offended, as an occasion of distinguishing his moderation. Cæsar did not dissemble his displeasure, but contented himself with obliging the poet to ask his pardon, and invited him to supper the same evening.

An elegant simplicity, and natural grace, form the character of Catullus. Happy, if he had not often disgraced that amiable delicacy by his Cynic immodesty.

LABERIUS:—(*Decimus*.)

Laberius, a Roman knight, succeeded admirably in composing mimes or farces, A. M. 3952. At Rome, a man of birth did not disgrace himself by writing poetry for the stage; but he could not act them without degrading himself. Notwithstanding this had long been an established opinion, Julius Cæsar pressed Laberius very earnestly to act one of his pieces upon the stage, and to induce him to comply, gave him a considerable sum of money. The poet refused it for some time, but was at last obliged to yield. The desire of a prince upon such an occasion, is a command.⁷ In the prologue to this farce, Laberius vents his grief most respectfully with regard to Cæsar, but at the same time in very pathetic terms. It is one of the finest fragments of antiquity, and I have inserted it at length, with the translation in the first volume of the second edition of my treatise upon study. Macrobius has preserved it with some other fragments of the same piece of poetry. He informs us also that this Roman knight, out of his great regret to see his age dishonoured in that manner, and to avenge himself by the only means in his power, maliciously inserted in the farce we speak of, several home strokes against Cæsar. A servant beaten by his master, cried out,—“ Help, Romans, we lose our liberty.”

Porro, Quirites! Libertatem perdimus.

And a little after he added:—“ He must necessarily fear many, whom many fear.”

Necesse est multos timeat, quem multi timeant.

The whole people knew Cæsar in those strokes, and cast their eyes upon him. When the performance was over, Cæsar, as if to re-instate him in the dignity of a Roman knight, from which he had departed through complaisance for him, rewarded him with a ring, which might be considered as a new patent of nobility. Laberius went afterwards to take his place among the knights; but they pressed together in such a manner, that there was no room for him.

⁷ Potestas, non solum si invitet, sed et, si supplicet, cogit. *Macrobius*.

Quod est potentissimum Imperandi genus, rogabat qui juberetur poterat. *Ausonius*.

6 Negat se magni facere aliquis poetarum, utrum Cæsar ater an albus homo sit: insania. *Quintilianus*. l. xi. c. 1.

SYRUS.

P. Syrus was a Syrian by birth, whence he took his surname of Syrus. From a slave at Rome, whither he was brought in his infancy, he became a freedman very soon, and was instructed with great distinction. He excelled in mimic poetry, in which he was Laberius' rival, and even surpassed him in the judgment of Cæsar. But the preference Cæsar gave him was thought to be intended only to mortify Laberius, for his having thrown some malicious strokes against him into his farce.

We have a work of Syrus, which consists of sentences in Iambic verse, disposed alphabetically. Seneca the elder repeats the opinion of Cæsius Severus, who preferred these sentences to any thing in the tragic and comic poets. This is saying a great deal. Seneca the younger considered them also as an excellent model.

Not long since a translation of these sentences, and a poem of Cornelius Severus, entitled *Ætna*, which had never appeared before in French, have been published. We are much obliged to authors, who endeavour to enrich our language with ancient works, unknown, and therefore new to it. This translator¹ observes, that La Bruyere has scattered almost all the sentences of P. Syrus throughout his characters, of which he gives us several examples like the following.—

Fortuna usu dat multa, mancipio nihil.
Levis est fortuna: cito reposit, quod dedit.

"Fortune gives nothing, and only lends for a time. To-morrow the fickle goddess resumes from her favourites, what now she seems to give them for ever."

Mortem timere crudelius est, quam mori.

"Death comes but once, though it puts us in mind of it at every moment of our lives. It is much more grievous to apprehend, than to suffer it.

Eat vita misero longa, felici brevis.

¹ Life is short to those who possess it in pleasures

1 This poem is written in hexameters, and is the second in the *Opuscula* ascribed to Virgil, in the folio edition of Crespinus, Lugduni, 1539, which, perhaps, Mr. Rollin never saw. Domitius Calderinus, the commentator, tells us in the argument:—Hoc Virgilianum esse opus perique ex authoribus testantur; et Seneca in epist. adeo ut Naasonem non ob aliam causam opus de *Ætna* dimisisse affirmet, nisi propter Virgilium, quem jam scripsisse compertum habebat. Cornelius Severus etiam ob eandem causam deteritus traditur.

2 M. Accarias of Serionne.

and enjoyments: it seems long only to such as languish in affliction."

POLLIO.

Pollio (*C. Asinius Pollio*), a person of consular dignity and a celebrated orator, had also composed tragedies in Latin which were much esteemed in his time. Horace speaks of him more than once.

Paulum severæ Musa Tragediarum
Dedit theatris. ————— Ode l. i. 2.
————— Pollio regum
Facta canit pede ter percussio. Sat. x. l. 2.

Virgil also mentions him with praise,—

Pollio et ipse facit nova carmina. Eclog. iii.

He was the first who opened a library at Rome for the use of the public.²

Augustus pressing him to espouse his party against Anthony, he represented to him that the services he had done and received from that competitor would not admit his entering into engagements against him: that therefore he was determined to continue neuter, well assured that he should become the victor's prey. The same prince, having on another occasion wrote Fescennine verses against him; "I shall take great care," said he, "not to answer. For it is not easy to scribble against a man who can proscribe."³

VIRGIL.

Virgil (*Publius Virgilius Maro*) was born A. M. 3934, Ant. J. C. 684, in a village called Andes near Mantua, of very obscure parents, in the consulship of Cn. Pompeius Magnus, and M. Licinius Crassus.⁴ He passed the first years of his life at Cremona, and at seventeen put on the *toga virilis*, (the habit of manhood) on the same day that the poet Lucretius died. After having made some stay at Milan he removed to Naples, where he studied the Greek and Roman literature with extreme application, and afterwards the mathematics and physic. Several little poems are ascribed to Virgil's youth, which seem unworthy of him. Having been driven out of his house and a small piece of land, A. M. 3963, Ant. J. C. 713, which was his whole estate, by the distribution of the territory of Mantua and Cremona amongst the

3 Asinius Pollionis hoc Romæ inventum, qui primus, Bibliothecam dicando, ingenia hominum rem publicam fecit. *Plin. l. xxxv. c. l.*

4 At ego taceo. Non est enim facile in eum scribere, qui potest proscribere.

5 Vit. Virg. incert. Auct.

veteran soldiers of Augustus, he came for the first time to Rome, and by the favour of Pollio and Mæcenas, both patrons of learning and learned men, recovered his estate, and was again put into possession of it.

This occasioned his first eclogue, and made him known to Augustus, upon whom he had bestowed a fine compliment in that poem, a precious monument of his gratitude. Thus his distress became in its consequence the source of his good fortune. He finished his *Bucolics* in three years: a work of extreme delicacy, and a specimen of what was to be expected from a hand, that knew so well how to unite the graces of nature with correctness and purity of style. Horace gives us the character of these pastorals in two words:

————— Moile atque facetum
Virgilio annuerunt gaudentes rure Camœna.

The soft and easy grace of rural strains,
The muses, that delight in woods and plains,
Have giv'n to Virgil.

Every body knows that in good Latinity the word *facetus* is not only applicable to raillery and pleasantry, but to every discourse and work of wit, in which fine genius, delicacy and elegance, are the prevailing characters.*

Mæcenas, who had a great taste for poetry, and had discerned all Virgil's merit in the proof he had lately given of it, would not suffer him to rest till he had engaged him to undertake a new work more considerable than the former. It is making a noble use of one's influence, and rendering great service to the public, to animate persons of learning in this manner, who often, for want of such inducements, remain inactive, and leave the greatest talents unemployed and useless. It was therefore by the advice of Mæcenas, that Virgil began the *Georgics*, to which he applied himself seven years. To enable himself to devote his whole attention to it, and to avoid every thing that might divert his thoughts, he retired to Naples, A. M. 3967, An. U. C. 717. He tells us this circumstance himself at the end of the fourth book of the *Georgics*, and also gives us the date of the time, when he finished them, which was in the 724th year of Rome, when Augustus, on his return from Egypt having advanced towards the Euphrates, by the terror of his arms, and the fame of the victories he had lately obtained, put the country into a consternation, and obliged Tigris and Phraates, who disputed the Parthian empire with each other, to conclude a kind of accommodation.†

Hæc super arborum cultu pecorumque canebam,
Et super arboribus: Cæsar dum magnus ad altum
Fulminat Euphraten bello, victorque volentes
Per populos dat jura, viamque affectat Olympi.
Illo Virgilium me tempore dulcis alebat
Parthenope, studii florentem ignobilis otti.

The leisure he enjoyed at that time at Naples was far from *ignoble* and obscure, as he thought fit to call it in this place. His *Georgics*, which were the fruits of it, in respect to diction, are the most finished of all the works he has left us, and even of all the poems that were ever composed in Latin. This proceeded from his having sufficient time to polish, and put the last hand to them. He retouched his works with an attention and accuracy not easily to be conceived. When the first fire of composing, in which every thing pleases, was over, he revised his productions, not with the complaisance of an author and parent, but the inexorable severity of a rigid critic, and almost an enemy. In the morning he composed a considerable number of verses; and returning to the examination of them, employed the rest of the day in correcting, and reducing them to a very small number. He used to compare himself to the bear, who from gross and unformed lumps, as her young ones are at their birth, gives them shape and proportion, by the pains she takes in licking them. Thus excellent works are formed. It was by this diligence in correcting, Virgil became the standard of good poetry amongst the Latins, and set the example of accurate, sweet, and harmonious versification. If we compare his verses not only with those of Cicero, but of Lucretius and Catullus, the latter will appear rough, unpolished, harsh, antique, and, as I have said before, we shall be tempted to believe them the verses of some ages before Virgil.

We are told that Augustus, at his return from his military expeditions, believed he could not unbend himself better after his fatigues, than by hearing this admirable poem read, to which he devoted four days successively. Virgil read him one book each day. He had a wonderful talent in making the beauty of his verses sensible by a sweet, articulate, and harmonious pronunciation. As soon as he seemed a little out of breath, Mæcenas took his place, and went on. Days passed in this manner are highly agreeable to a prince of fine taste and genius: a pleasure infinitely superior to those insipid and frivolous diversions, which almost engross the generality of men. But at the same time how admirable is the goodness of this lord of the world, who thus familiarizes himself with a man of letters, who treats him almost as his equal, who carefully spares him his voice and his spirits, and considers his health as a public good! I do not know however whether it was sparing Virgil, to treat him with such affecting marks of friend-

* Facetum non tantum circa ridicula opinor consistere
—Decoris hanc magis, et excolit cujusdam elegantie appellationem puto. *Quintil.* l. vi. c. 3.

† Dio. Cass. l. li.

ship and esteem. For an author, after such favours, spares himself no longer, and sooner or latter consumes himself by his tenacious attachment to his studies.

Virgil immediately after began his *Æneid*, to which he applied himself twelve years. Augustus when employed in the war against the Cantabri, pressed him earnestly, by several letters which he wrote him, to send him some part of the *Æneid*: but Virgil always excused himself. He represented to him, that if he had thought his *Æneas* worthy of that honour, he should willingly have sent him to Cæsar; but that he had found the work far more difficult than he imagined it, and that he began to fear, that it was rashness and a kind of madness in him to undertake it.¹

On the return of that prince, A. M. 8976, AN. U. C. 731, Virgil could no longer refuse to satisfy his just impatience, and accordingly read him the second, fourth, and sixth books of the *Æneid*, in the presence of his sister Octavia. She had some time before lost her son M. Claudius Marcellus, a prince of great merit, whom Augustus intended for his successor in the empire. Virgil had given the praise of young Marcellus a place in the sixth book of the *Æneid* with so much address, that it is impossible to read it without being exceedingly moved. When he came to this passage, the rehearsal of the verses, which are twenty-six in number, made the emperor and Octavia weep immoderately. It is even said, that Octavia swooned away at these words; *Tu Marcellus eris*. She ordered (*dena sestertia*) ten great sestercies to be paid the poet for each of these verses, which amounted to about seventeen hundred pounds sterling.

Virgil after having finished the *Æneid* designed to retire for three years in order to revise and polish it. He set out with this view for Greece. At Athens he met Augustus on his return from the East, and thought proper to change his purpose and to attend that prince to Rome. He was taken sick upon the way, and staid behind at Brundisium. Finding his illness increase, he earnestly desired his manuscripts to be brought him, in order to throw the *Æneid* into the fire. Because nobody had complaisance enough to comply with that request, he ordered that poem by his will to be burned, as an imperfect work. Tucca and Varius, who were with him, represented, that Augustus would never suffer it, and upon that remonstrance Virgil left his writings to them, upon condition that they would add nothing to them, and leave the hemisticks as they found them.

¹ De *Ænea* quidem meo, si mehercule jam dignum auribus haberem tuis, libenter mitterem. Sed tanta inchoata res est, ut penè vitio mentis tantum opus ingressus mihi videar. *Macrob.* l. l. c. ult.

Virgil died at Brundisium, in the 735th year of Rome, A. M. 8980, aged fifty-two. His bones were carried to Naples, and buried two miles from that city, with this inscription on his tomb, which he made himself, and which in two lines includes the place of his birth, death, and burial, with the number of his works.

Mantua me genuit, Calabri rapuere, tenet nunc
Parthenope, cecini pascua, mura, duces.

The epic poem must be a work of extreme difficulty, as during so many ages, Greece and Rome scarce produced two geniuses sufficiently sublime to sustain it in all its spirit and dignity. And since then, has the world, in any language whatsoever, poems of this kind, that can justly be compared with those of Homer and Virgil?²

I have observed, in speaking of the former, in what manner Virgil had formed the design and plan of the *Æneid* upon the *Iliad* and *Odyssey* of Homer, which gives the original a great advantage over the copy. Past ages however have not yet decided, to which of the two the preference ought to be given. Till judgment can be passed on this point, which in all probability will never happen, we may adhere to Quintillian's opinion, cited before in the article of Homer. There is, says he, more genius and force of nature in Homer; and more art and labour, because more of both was necessary, in Virgil.³ The first is indisputably superior in the grand and the sublime: the other perhaps makes us amends for what he wants in these points, by the harmony of parts and the exact equality he supports throughout his work. To this we may add, that Virgil did not live to put the last hand to his poem, which without doubt would have made it much more perfect than it is, though, as we have it, it is of inestimable value.

We may most certainly ascribe to Caligula's madness the contempt and hatred he expressed for Virgil, whose writings and portraits he industriously endeavoured to have banished out of all libraries.⁴ He had the extravagance to say, that poet had neither wit nor learning: *nullius ingeni, minimæque doctrine*. The emperor Alexander Severus judged very differently of him.⁵ He called him the Plato of the poets, and placed

² It is certain that our *Milton* was not inferior to either of them in many of the characters of Epic poetry; and that he was in some superior to them both; as in the grandeur of his matter, his learning, characters, and the machinery of his work. See *Addition on Milton*.

³ Ex hercle, ut illi naturæ celestis atque immortalis cesserimus, ita curæ et diligentia vel ideo in hoc plus est, quod ei fuit magis laborandum: et quantum eminentioribus vincimur, fortasse æqualitate pensamus. *Quintil.* lib. l. cap. l.

⁴ Sueton, in Calig. c. 34.

⁵ Lamprid. Alex. Sever.

his picture, with that of Cicero, in the chapel, where he had placed Achilles and other great men. It is highly for the honour of learning to see an emperor give poets, orators, and conquerors the same rank.

In the life of Horace, I shall relate a circumstance in that of Virgil, which in my judgment does him as much or even more honour than his genius for poetry.

HORACE.

HORACE (*Quintus Horatius Flaccus*) was of Venusium, and, as he says himself, the son of a freedman. He was born in the 688th year of Rome, A. M. 3940. His father, though only a freedman, and of a very moderate fortune, took particular care of his education.* Persons of fortune, and rich officers of the army, contented themselves with sending their children to a master, who taught them to read, write, and cast accounts. But Horace's father, who had discovered in his son a fund of genius capable of the greatest things, had the courage to carry him to Rome, in order to give him such an education as knights and senators gave their children. To see the manner in which young Horace was dressed, and the slaves that followed him, one might have taken him, says he of himself, for the rich heir of a long train of opulent ancestors; whilst his father however had only a small piece of land for his whole estate. He was perhaps excessive in this point; but who would venture to condemn him? He was not afraid of ruining either himself or his son by employing his whole income for his instruction; judging a good education the best patrimony he could leave him. He did more; he took upon himself the care of him, served him instead of a governor, and went with him to all his masters.

*Ipsæ mihi custos incorruptissimæ omnes
Circum Doctores aderat.*

We are charmed with the respect and warm gratitude, which Horace, during his whole life, expresses for such a father. "By his care," says he, "he preserved me free, not only from all acts of impurity, which is the highest praise of virtue, but from all reproach or suspicion of that kind." Let young persons consider well these words, and remember that it is a heathen who thinks and speaks in this manner.

*Quid multa? Pudicum
Qui primus virtutis honos, servavit ab omni
Non solum factis, verum opprobrio quoque turpi.*

Horace's father, though a man of no letters or

erudition, was of no less use to his son, than the most able masters he could hear. He took pains himself to form him, instructed him familiarly, and made it his business to inspire him with an abhorrence for vice, by pointing it out to him under sensible examples. If he would have him avoid some criminal action: could you doubt, said he to him, whether the action I would have you shun, be contrary to virtue and your true interest, when such an one who had committed it, is universally condemned and despised for it? That such an one by his debauched life, has ruined his health and fortune: (and it was here the strokes of satire came in.) On the contrary, if he desired to recommend some good action to his imitation, he cited somebody who had done it with success; and always chose his examples out of the principal persons of the senate, and those of greatest worth.

This manner of instructing youth has its great utility, provided it does not degenerate into detraction and satire. For examples make much more impression upon the mind, than any discourses, or precepts of morality.⁷ It is in the same manner Demæa instructs his son in Terence's *Adelphi*.

*Nihil præmitto, consuefacio. Denique
Inspicere tanquam in speculum in vitas omnium
Jubeo, atque ex aliis sumere exemplum sibi.
Hoc facito et hoc fugito, &c. Act. III. Sc. 3.*

"I omit nothing, and gradually accustom him to virtue. In fine, I oblige him to look into the lives of others, as into a glass, and to learn from their example to imitate the good, and fly the bad."

If we may believe Horace, it is to these paternal instructions, received with attention and docility, that he was indebted for being exempt from great failings.

*Ex hoc ego sanus ab illis
Perniciem quæcumque ferunt, mediocribus, et quæis
Ignoscas, vitis teneor.*

But it is also to the same lessons he ascribes, whether out of pleantry or otherwise, the taste for satire which he retained during his whole life.

He is never weary of expressing himself upon his good fortune in having such a father, and speaks of him with a gratitude that we cannot sufficiently esteem. "As long as I am capable of thinking with reason, I shall never be ashamed of so good a father. I shall never imitate the generality, who to excuse the meanness of their extraction, take care to observe, that if they do

6 Horat. Sat. G. l. i.

7 Longum iter est per præcepta, breve et efficax per exempla. Senec. *Epid.* G. l. i.

not descend from illustrious ancestors, it is no fault of theirs. I think and speak quite differently. For, did nature permit us to begin our lives again after a certain number of years, and would give us the liberty of choosing such parents as we thought fit, others might choose theirs by their vanity; but for my part, contented with my own, I would not seek for noble ones distinguished by rods and axes, and curule chairs."

Nil me pœniteat sanum patris hujus; eoque
Non, ut magna dolo factum negat esse suo pars,
Quod non ingenuos habeat clarosque parentes,
Sic me defendam. Longè mea discrepat istis
Et vox et ratio. Nam, si natura juberet
A certis annis ævum remeare peractum,
Atque alios legere; ad fastum quoscunque parentes
Optaret sibi quisque: meis contentus honestos
Fascibus et sellis nollem mihi sumere. —

Sat. 6.

It must be confessed that there is great meanness of spirit in blushing at meanness of birth. The reader no doubt has observed, that most of the illustrious writers hitherto mentioned were of obscure condition, and that many of them were even slaves. Did it ever enter into the thoughts of any man of sense to esteem them the less upon that account? Nobility, riches, office, can they be brought into competition with the talents of the mind, and are they always proofs of merit?

When Horace had attained to about nineteen years of age, his father sent him to study at Athens, for he would not let him go, and kept him always under his eye, till he was of years to take care of himself, and to avoid the corruption of manners which then prevailed. He had studied polite learning at Rome, and had formed his taste principally by reading Homer. He proceeded to more exalted science in Greece, and applied himself to the study of philosophy. That study seems to have pleased him exceedingly, and he extremely regretted leaving so agreeable a residence sooner than he desired. Brutus passing by the way of Athens into Macedonia, carried several young persons thence along with him, of which number was Horace. He made him a tribune of the soldiers. Horace had then been four or five years at Athens.

Rome nutrirî mibi contigit, atque doceri
Iratu Græcis quantum nocuisset Achilles.
Adjecere bonæ paulo plus artis Athenæ;
Scilicet ut possem curvo dignoscere rectum,
Atque inter sylvas Academi querere verum.
Dura sed emovere loco me tempora grato,
Civilisque rudem belli tulit æstus in arma,
Cæsaris Augusti non responsura lacertis.

Epist. li. l. 2.

A year after, the battle of Philippi was fought, in which our poet, who was not born for arms,

gave no proofs of his bravery, having taken to flight, and abandoned his buckler, as he confesses himself:

Tectum Philippo et celerem fugam
Sensî, relicta non bene parmula.

Od. vii. l. 2.

Horace, on his return, was not long before he became known to Mæcenas. It was the excellent Virgil, for so he calls him, *optimus Virgilius*, who first spoke of his dawning merit to his patron. Varius afterwards confirmed what he had said, and seconded him. Horace was introduced. When he appeared before Mæcenas, respect for a person of his grandeur, and his natural timidity, confounded him so much, that he spoke very little, and with great hesitation. Mæcenas answered him in a few words, according to the custom of the great, after which Horace withdrew. Nine months passed without Horace's hearing any farther, or taking any pains to do so on his side. It might have been thought, that Mæcenas, little pleased with his first visit, which did not seem to argue a man of great parts, had no farther thoughts of Horace. At the expiration of that term, he sent for him, and admitted him into the number of his friends; (these are Horace's own words,) and from that time they lived in the greatest intimacy.

Nulla etenim mihi te fors obtulit. Optimus olim
Virgilius, post hunc Varius, dixere quid essem.
Ut veni coram, sit gultum pauca locutus,
(Infans namque pudor prohibebat plura profari)
Non ego me, &c.

Sed quod eram, narro. Respondes, ut tuus es mos,
Pauca. Ab eo: et revocas nono post mense, jubescas
Esse in amicorum numero.

Satyr. vi. l. 1.

Custom with us (in France) does not allow a man of learning, scarce known as such, to style himself the friend of so great a lord as Mæcenas. The ancients had more simplicity, but at the same time a more noble freedom of manners and greatness of soul. The Roman language, which was born in the bosom of liberty, had nothing of mean and servile in it, and did not admit any of those frivolous compliments with which ours is overrun. *Jubes esse in amicorum numero.*

But what I admire here, is the generous behaviour of Virgil. He knew the young poet's merit, and perceived in him a genius formed for success in courts; and the event demonstrated he was not mistaken. He might have apprehended setting himself up in his person a dangerous rival, who from sharing at first in the favour of their common patron, might afterwards supplant him entirely. Virgil had none of these thoughts, which suit only a mean and sordid spirit, and which he would with reason

have judged injurious to his friend, and still more so to Mæcenas. For the house of that favourite was not like those of most great lords and ministers, where every body regards solely their own interest; where the merit of others gives umbrage, and every thing is carried on by cabal and secret collusion; where fidelity and honour are little known, and where the blackest designs are often covered under the specious outsides of great friendship and affection. "It is not in this manner," says Horace to one, who promised, if he would procure him the least access to the person of Mæcenas, to put him soon into a condition of supplanting all others in his favour, "it is not thus we live at Mæcenas's. There never was a house of greater integrity, nor more remote from all intrigue and cabal than his. A richer, or more learned person there, gives me no manner of pain or umbrage. Every one there has his due place, and is contented with it."

Non isto vivimus illic
Quo tu rere modo. Domus hac nec purior ulla est,
Nec magis his aliens malis. Nil mi officit unquam
Ditior hic, aut est quia doctior. Est locus uni
Cuique suus. Sat. ix. l. 1.

Mæcenas, from the first, did Horace good offices with the prince, against whom he had borne arms on the side of Brutus. He obtained his pardon, with the restitution of his estate. From that time Horace began to be very familiar with Mæcenas, and to share in his confidence and pleasures. He accompanied him in his journey to Brundisium, as appears from the fifth satire of the first book. Horace's credit and reputation increased every day by the poems he published, as well upon the victories of Augustus, as other events, and various subjects, whether odes, satires, or epistles.

The poet Quintilius Varus, Virgil's relation, being dead, Horace endeavours to console his friend upon that occasion by the xxivth ode of book I.

Ergo Quintilius perpetuus sopor
Urget? cui pudor, et justitie soror
Incorrupta fides, nudaque veritas,
Quando ullum invenient parem?
Multis ille quidem stebilis occidit,
Nulli stebilius quam tibi, Virgili.
Tu frustra plus, heu, non lita creditum
Poscis Quintilium deos.

When Virgil himself set out for Greece with design to employ his leisure in revising, and putting the last hand to the *Æneid*, Horace, upon occasion of that voyage, composed an ode full of vows, which unfortunately were not heard. It is the third of the first book.

Sic te diva potens Cyprî,
Sic fratres Helenæ, lucida sidera,

Ventorumque regat pater,
Obstrictis aliis, præter Iapyga,
Navis, quæ tibi creditum
Debes Virgilio; sinibus Atticis
Reddas incolumem, precor,
Et servas animæ dimidium meæ.

So may th' auspicious queen of love,
And the twin stars, the seed of Jove,
And he, who rules the raging wind,
To thee, oh sacred ship, be kind,
And gentle breezes fill thy sails,
Supplying soft Elysian gales;
As thou to whom the muse commends
The best of poets, and of friends,
Dost thy committed pledge restore,
And land him safely on the shore,
And save the better part of me
From perishing with him at sea.

Dryden to Lord Roscom.

We may judge of Mæcenas's tender friendship for Horace, by the few words he wrote to Augustus in his will: "I conjure you to have the same regard for Horace as myself." Augustus offered him the employment of secretary to himself, and wrote for that purpose to Mæcenas in these terms. "Hitherto I have had no occasion for any body to write my letters; but at present the multiplicity of affairs, and my infirmity, make me desire you to bring our Horace with you. Let him then cease to be a parasite at your table, and come to mine to assist me in writing my letters." Horace, who was very fond of his liberty, did not think proper to accept so honourable an offer, which would have laid him under too great restraint, and excused himself upon account of his real or pretended infirmities. The prince was not in the least offended by Horace's refusal of that office, and retained the same friendship for him as before. Some time after he wrote to him to this effect. "Believe you have some right to be free with me, and pray use it, as if we lived together: in doing which, you only act as you may with the justest pretence; for you know it was my desire, that we should have been upon those terms, if your health would have admitted it."

With how many reflections does this little circumstance supply us in respect to the goodness of Augustus, the frankness of Horace, the simple and unrestrained intercourse of the world in those days, and the difference between ours and the manners of the ancients. A privy

1 Veniet igitur ab ista parasitica mensa ad hanc regiam.
The pleasantry of Augustus turns upon Horace's not being of Mæcenas's family, and consequently having no right to eat at his table.

2 Sumo tibi aliquid juris apud me, tanquam si convictor mihi fueris. Rectè enim et non temerè feceris, quoniam id usûs mihi tecum esse volui, si per valetudinem tuam fieri posset. *Suet. in vit. Virg.*

secretary at table with an emperor! A poet refuses that honour, without the emperor's taking offence!

Horace's pleasures were confined to his houses either in the country of the Sabines, or at Tibur, where, free from care and disquiet, he enjoyed in an agreeable retreat all the sweets of leisure and repose, the sole objects of his wishes.

O rus, quando ego te aspiciam, quandoque licebit
Nunc veterum libris, nunc somno et inertibus horis,
Ducere solitæ jucunda oblivia vitæ?

The court, which is so pleasing to the ambitious, was to him only banishment and a prison. He thought he only lived and respired when he returned to his dear country abode, where he found himself more happy than all the monarchs of the earth.

—Vivo et regno, simul ista reliqui,
Quæ vos ad cælum effertis clamore secundo.

He died in the consulship of C. Marcius Censorinus and C. Asinius Gallus, A. M. 8997, Ant. J. C. 7, at the age of fifty-seven, after having nominated Augustus his heir before witnesses, the violence of his illness not allowing him time to sign his will. He was interred at the extremity of the Esquiline hill in a tomb joining to that of Mæcenas, who died a little before him the same year. He had always desired, and even seemed to have bound himself by oath, not to survive him.

Ah te meæ si partem animæ rapit
Maturior vis, quid moror altera,
Nec carus aequè, nec superest
Integer? Ille dies utramque
Ducet ruinam. Non ego perfidium
Dixi sacramentum. Ibinus, ibinus,
Utumque præcedes, supremum
Carpere iter comites parati.—Od. xvii. l. 2.

The works of Horace consist only of his Odes, Satires, and Epistles, with the Art of Poetry. I have spoken of his Odes, and given their character, in comparing them with those of Pindar. His Satires and Epistles are, in my opinion, of inestimable value. They are void of all show and glitter. Their style is generally a kind of prose in verse, that has neither the pomp nor even the sweetness and harmony of poetical measures. This does not proceed from the incapacity of Horace to make fine verses. Does not the passage by which he excuses his want of sufficient talents for celebrating the actions of Augustus, demonstrate how capable he was of it?

—Cupidum, pater optime, vires
Deficiunt. Neque enim quisvis horrentia pillis
Agrina, nec fracta pereuntes cupide Gallos,
Aut labentis equo describat vulnera Parthi.

Sat. i. l. 2.

Is there in any poet a description of greater elegance, expression, and energy, or one that paints a fact in livelier colours, than that of the country mouse's entertainment of the city mouse.

—Olim
Rusticus urbanum murem mus paupere fertur
Accipisse cavo, veterem vetus hospes amicum:
Asper, et attentus quesitis; ut tamen arcum
Solveret hospitilis animus. Quid multa? Neque illi
Sepositi ciccris, nec longè invidit avenæ:
Aridum et ore ferens acinum, semesaque lardi
Frusta dedit, cupiens variâ fastidia comâ
Vincere tangentis malè singula dente superbo.

Sat. vi. l. 2.

The rest of the fable is in the same taste.

This elegance, this grace and spirit of language and images are not (generally speaking) to be found either in the satires or epistles. What is it then that affects us so agreeably in reading them? It is the delicacy, urbanity, fine raillery, and easy manner, which prevail in them: it is a certain air and vigour of nature, simplicity, and truth: it is even that affected negligence in the measure of the verses, which still adds a more native air to the sense, an effect the Marotic style¹ has in our language: it is a fund of reason, good sense, and judgment, that shows itself every where; with a wonderful art in painting the characters of men, and placing their faults and ridiculous points in full light. Only great and peculiar beauty and force of genius can make such lively impressions as these on the mind without the help of poetical graces, numbers, and harmony. Quintilian contents himself, after having spoken of Lucilius, with saying, "that Horace has much more elegance, and purity of style, and that he excels in criticising the manners and vices of men."²

The Art of Poetry, with some of the satires and epistles that turn upon the same subject, include whatever is most essential in regard to the rules of poetry. This little essay may be considered as an excellent abridgment of rhetoric, and highly proper to form the taste.

I say nothing of the manners of Horace. To judge of him only by certain passages in his works, one would take him for the most virtuous man in the world, and even an austere philosopher. If we may believe him, "he finds all time long and tedious, but that which he employs in the sole object worthy of our cares, which is equally useful to rich and poor, and when neglected, is alike pernicious to youth and age."

¹ The style of C. Marot, a French poet, in which Fontaine followed and excelled him. Its characters are the natural, simple, humorous, and antique, of which last it affects the terms.

² Multo est terrior ac purius magis Horatius, et ad notandos hominum mores præcipuus. *Idem* 10 c. 1.

Sic mihi tarda fluunt ingrataque tempora, quæ spem
 Consiliumque morantur agendi gnæviter id quod
 Æquè pauperibus prodest, locupletibus æquè,
 Æquè neglectum senibus puerisque nocet.

At bottom he is a true Epicurean, solely intent upon his pleasures, and so loose in his sentiments and expressions, that, as Quintilian says of him, a man of breeding or morality would not willingly explain certain passages in his works: *Horatium in quibusdam nolim interpretari*. This does not prevent his having excellent maxims of morality. It is with Horace, as with the rest of the heathen authors. When it does not clash with their darling passion, and the question is to lay down fine principles, not to put them in practice, they not only speak the most refined truths and the most elegant reason, but often even religion, in the most beautiful and just terms. This we ought to consider as the precious remains of the esteem for beauty and perfection, implanted in the heart of man by the Author of nature, and which his corruption could not entirely extinguish.

OVID.

Ovid (*Publius Ovidius Naso*) of the equestrian order, was born in the consulship of Hir-
 tius and Pansa, as well as Tibullus, in the 709th year of Rome, A. M. 3961, Ant. J. C. 43. He studied eloquence under Arellius Fuscus, and declaimed in his school with great success.³ He had by nature so strong an inclination for versifying, that to indulge it, he renounced all care of his fortune. But if this propensity to verse entirely extinguished in him the flame of ambition, it nourished and augmented that of love, a most pernicious passion to those who abandon themselves wholly to it. His father saw him quit the usual course of the Roman youth with pain, and absolutely renounce the hopes of honours and offices, to pursue an unhappy taste, that tended to nothing, and of which no doubt he foresaw all the bad effects. He spoke to him in the strongest terms, made use of remonstrances and entreaties, asking him what advantage he could propose to himself from that frivolous study, and whether he imagined he should excel Homer either in reputation or fortune, who died poor. The lively reproaches of his father made an impression upon him. In deference to his advice, he determined to make no more verses, to write only in prose, and to qualify himself for the employments that suited young men of his rank. Whatever efforts he made, or pretended to make, nature still prevailed. Ovid was a poet in spite of himself:

the feet and numbers rose of themselves under his pen; and every thing he attempted to write, was verse.

Sæpe pater dixit: studium quid inutile tentas?
 Mæonides nullas ipse reliquit opes.
 Motus eram dictis, totoque Helicone relicto
 Scribere conabar verba soluta modis.
 Sponte sua carmen numeros veniebat ad aptos;
 Et, quod tentabam scribere, versus erat.

He composed with wonderful facility, and could not give himself the trouble to retouch his verses; all fire in composing, and all ice in correcting, as he tells us himself. The negligence of his style might be forgiven, if it was not attended with unbounded licentiousness in point of manners, and if he had not filled his poems with filth and obscenity. Augustus made this the pretext for banishing him: a very laudable motive, if the real one, for that conduct. Such poets are poison and contagion to the public, with whom all intercourse ought to be prohibited, and their poems to be abhorred as the bane of mankind. But this was only pretext. A secret cause of discontent, of which Ovid often speaks in his verses, but in general terms and without explaining it, that has always remained unknown, was the cause of his misfortune.

He was banished to Tomos, a city of Pontus in Europe, upon the Euxine sea, near the mouths of the Danube. The emperor neither confiscated his estate, nor caused him to be condemned by a decree of the senate, but made use of the term *relegare*, which in the Roman law is of more gentle construction than to banish.

He was in the fifty-first year of his age, when he set out from Rome to Tomos, and had composed his *Metamorphoses* before his disgrace. On his condemnation to quit Rome he threw it into the fire, either out of indignation, or because he had not put the last hand to, and entirely finished it.

Carmina mutatas hominum dicentia formas,
 Infelix domini quod fuga rupit opus:
 Hæc ego discedens, sicut bona multa meorum,
 Ipse mea posui mæstus in igne manu.

Trist. l. i. *Eleg.* 6. l. iii. *Eleg.* 14.

Some copies, which had before been taken of that work, prevented its being lost.

The place to which he was sent, was a real place of punishment to him: he gives us terrible descriptions of it in several parts of his poems. What distressed him most there, was his being exposed to the severe coldness of the climate, in the neighbourhood of a barbarous and warlike people, who were always in arms, and giving him perpetual apprehensions: a melancholy situation for a delicate Italian, who had passed

³ Senec. Contr. 10. l. ii.

his life in a mild and agreeable climate, and had always enjoyed ease and tranquillity. Though he could not obtain either to be recalled, or to have the place of his banishment changed, he never failed in his respect for the emperor, and persisted unalterably in praising him with an excess next to idolatry. He may even be said to have literally and actually idolized him, when he was informed of his death. He not only wrote a poem in his praise in the Getic language, to make him known and respected by those barbarous nations, but invoked him also, and consecrated a chapel to him, where he went every morning to offer incense, and adore him.

Nec pietas ignota mea est : videt hospita terra
In nostra sacrum Caesaris esse domo.
Hic ego do toties cum thure precantia verba,
Eco quoties surgit ab orbe dies.

De Ponto, l. iv. Epist. 19.

The successor and family of that prince had a great share in all this worship, and were evidently the real objects of it. Ovid however did not find it a remedy for his misfortunes. The court was as inexorable under Tiberius as before. He died in his banishment in the fourth year of that emperor's reign, and the 771st of Rome, at about sixty years of age, after having been nine or ten years in Pontus.

He had desired, in case he died in the country of the Getæ, that his ashes might be carried to Rome, in order that he might not continue an exile after his death, and that the following epitaph might be inscribed on his tomb.

Hic ego qui jaceo tenerorum lusor amorum,
Ingenio perili Naso poëta meo.
At tibi, qui transis, ne sit grave, quisquis amasti,
Dicere : Nasonis mollior ossa cubent.

Here Naso lies, who sung of soft desire,
Victim of too much wit, and too much fire.
Say, who have lov'd, whene'er you pass these stones,
Light lie the earth on hapless Naso's bones.

Ovid apprehended the immortality of the soul, (with more reason than he thought) and desired that it might perish with the body, for he did not care that his shade should wander amongst those of the Sauromatæ. Hence he desired that his bones might at least have a grave at Rome.

Atque utinam pereant animæ cum corpore nostræ,
Edugiatque avidos pars mea nulla rogos.
Nam si morte carens vacuas volat altus in auras
Spiritus, et Samii sunt rata dicta senis ;
Inter Sarmaticas Romana vagabitur umbras,
Perque feros manes hospita semper erit.
Ossa tamen facito parva referantur in urna :
Sic ego non etiam mortuus exul ero.

He had composed both before and after his

banishment a great number of verses, of which many are lost ; and it were to be wished that still less had come down to us. His *Medea* is extolled for a perfect tragedy, which shows, says Quintilian, in whose time it was extant, of what that poet was capable, if instead of abandoning himself to the luxuriance of his too easy and fertile genius, he had chose rather to check, than indulge, its rapidity. *Ovidii Medea videtur mihi ostendere quantum vir ille prastare potuerit, si ingenio suo temperare quam indulgere maluisset.*¹

The same Quintilian passes his judgment upon this poet's works in few, but very just and expressive, words, and which, in my opinion, perfectly characterize them. *Lascivus quidem in Heroicis quoque Ovidius, et nimium amator ingenii sui : laudandus tamen in partibus.* And indeed, Ovid's great fault is redundancy, which proceeded from the warmth and abundance of his genius, and his affecting wit at the expense of the solid and the great ; *lascivus*. Every thing he threw upon paper, pleased him. He had for all his productions a more than paternal indulgence, which would not permit him to retrench, or so much as alter, any thing. *Nimium amator ingenii sui*. It must however be confessed, that he is admirable in parts ; *laudandus tamen in partibus*. Thus in his *Metamorphoses*, which is indisputably the finest of his works, there are a great number of passages of exquisite beauty and taste. And this was the work he valued most himself, and from which he principally expected the immortality of his name.

Jamque opus exegi, quod nec Jovis ira, nec ignes,
Nec poterit ferrum, nec edax abolere vetustas.

Metam. lib. xv. in fine.

TIBULLUS AND PROPERTIUS.

These two poets, who flourished at very nearly the same time, and excelled in the same kind of poetry, are judged to have wrote with great purity of style and delicacy. Tibullus is preferred to Propertius.

PHÆDRUS.

Phædrus, a native of Thrace, Augustus's freedman, wrote in the time of Tiberius. We have five books of Fables, composed by this author in Iambic verse, which he himself called Æsop's fables, because he made that inventor of them his model ; from whom he has also often borrowed the subject of his fables.

Æsopus auctor quam materiam repperit,
Hanc ego polivi versibus scenaria.

Prolog. l. 1.

¹ Quintil. l. x. c. 1.

He declares from the beginning of his work, that this little book has two advantages; which are, to amuse and divert the reader, and at the same time to supply him with wise counsels for the conduct of life.

Duplex libelli dos est, quodd risum movet,
Et quodd prudenti vitam consilio movet.

Ibid.

And indeed, besides that the subjects of this work, in which beasts, and even trees are introduced speaking with wit, are diverting in themselves, the manner in which they are treated has all the beauty and elegance it is possible to throw into it; so that Phædrus may be said to have used in his fables the language of nature herself, so plain and simple is his style, and at the same time so full of wit and delicacy.

They are no less valuable in respect to the wise counsels and solid morals they contain. I have observed elsewhere, in speaking of *Æsop*, how much this manner of instructing was in honour and use among the ancients, and the value the most learned men set upon it. Were we only to consider, these fables by the advantage to be made of them in the education of children, to whom, under the appearance of agreeable stories, they begin so early to propose principles of probity and wisdom, we could not but conceive highly of their merit. Phædrus has carried his views still farther: there is no age, nor condition, but may find excellent maxims in them for the conduct of life. As virtue is every where treated with honour and crowned with glory in them; so they represent the vices, as injustice, calumny, violence, in lively but frightful colours, which make them the contempt, hatred, and detestation of every body. And this undoubtedly was what exasperated *Sejanus* against him, and exposed him to extreme danger under a minister, who was the irreconcilable enemy of all merit and virtue. Phædrus mentions neither the cause, any particular circumstance, nor the event of this animosity. He only complains that all the forms of justice are violated in regard to him, having his declared enemy *Sejanus* himself for his accuser, witness, and judge.

Quodd si accusator alius Sejano foret,
Si testis alius, iudex alius denique,
Dignum saterer esse me tantis malis.

In Prolog. l. iiii.

It is very probable that unworthy favourite, who insolently abused his master's confidence, had taken offence at some strokes in those fables, which might be applied to him. But as there was no name to them, his making that application, was confessing, or at least knowing, himself guilty; Phædrus having no other view

than to lash the vices of mankind in general, as he expressly declares.

Suspiciōne si quis errabit sua,
Et rapiet ad se quod erit commune omnium;
Stultè nudabit animi conscientiam.
Huius excusatum me velim nihilominus.
Neque enim notare singulos mens est mihi,
Verùm ipsam vitam et mores hominum ostendere.

Ibid.

Neither the time, place, nor any other circumstance of his death is known. He is believed to have survived *Sejanus*, who died in the eighteenth year of the reign of *Tiberius*.

Phædrus has given a very honourable testimony of himself, in declaring that he had banished all desire of riches from his heart.

Quamvis in ipsa natus penè sim schola,
Curamque habendi penitus corde eraserim.

Ibid.

He does not seem either so indifferent or disinterested with regard to praise; and is very apt to speak of his own merit. It was indeed so great, that nothing of antiquity surpasses his fables in simple and natural beauty.

It is surprising that with all this merit Phædrus should be so little known and celebrated by ancient authors. Only two speak of him, *Martial*² and *Avienus*; and it is still doubted, whether the verses of the first, that mention Phædrus, mean our author. So learned a man as *Casaubon* did not know that there was such a book as Phædrus' in the world, till the edition published at *Troies* by *Peter Pithou* in 1596. The latter sent one of them to *F. Sirmond*, who was then at *Rome*. That Jesuit showed it to the learned there, who at first judged it spurious. But upon a nearer examination they changed their opinion, and believed that they saw some characters of the Augustan age in it. *Father Vavasour*³ relates this little circumstance with his usual elegance.

Fontaine, who carried this kind of writing to its highest perfection in the French language, by treading in the steps of Phædrus, has however differed greatly from his original. Whether he thought the French language not susceptible of that happy simplicity, which charms and transports all persons of taste in the Latin authors; or found, that manner of writing did not suit his genius, he formed a style entirely peculiar to himself, of which perhaps the Latin tongue itself is incapable, and which without being less elegantly plain and natural, is more humorous, more various, easy and full of graces, but graces, which have nothing of pomp, swell, and affectation, and which only serve to render the sense and circumstances more gay and amusing. The

2 *Epig.* 20. l. iiii.3 In *Tract. de Ladicra* dict.

same, in my opinion, may be said in respect to Terence and Molière. They both excel in their way, and have carried comedy to the highest perfection, to which perhaps it is capable of attaining. But their way of writing is different. Terence excels Molière in purity, delicacy, and elegance of language. But then the French poet is infinitely above Terence in the conduct and plan of his plays, which form one of the principal beauties of dramatic poems; and especially in the justness and variety of his characters. He has perfectly observed the precept Horace gives poets who would succeed in this way of writing, that is, to copy nature in the manners and inclinations of men, which age and condition vary exceedingly.

*Ætatis cujusque notandi sunt tibi mores,
Mobilibusque decor naturis dandus et annis.
Horat. in Art. Poet.*

SECT. III.

Third Age of the Latin Poetry.

I have already said, that this third age of Latin poetry began about the middle of Tiberius' reign. Some of the poets, of whom I shall soon speak, might be ranked among those of the best age, to which they are very near both in time and merit. It is however believed, that there is some difference discernible in them.

SENECA.

Of the ten Latin tragedies which have been collected and published together under the name of Seneca, it is generally enough agreed, that the finest were written by the celebrated philosopher, who was Nero's preceptor. The Medea is believed to be undoubtedly his, because Quintilian¹ quotes a passage from it, to which he adds his name. There are some particular reasons also for ascribing the *Œdipus* to him. Mr. Le Fevre finds too much of declamation in the *Agamemnon*, *Troas*, and *Hercules*. Others, however, believe, that the *Troas* and *Hippolytus* are really his: but that the *Agamemnon*, *Hercules furens*, *Thyestes*, and *Hercules Etæus*, are either Seneca the father's, or some other unknown author's. As to the *Thebais* and *Octavia*, they are thought entirely unworthy of Seneca's genius and eloquence. And it is certain that the latter was not written till after the death of Seneca, and even of Nero.

PERSIUS.

Persius, (*Aulus Persius Flaccus*) a satiric poet in the reign of Nero, was born at Volaterræ,

a city of Tuscany. He was of the equestrian order, and related and allied to persons of the first rank. He studied till twelve years old at Volaterræ; and afterwards at Rome under the grammarian Palemon, the rhetorician Verginius, and a Stoic philosopher named Cornutus, who conceived a particular friendship for him, and with whom he always lived in the greatest intimacy.

This poet was of a very gentle and humane disposition, very friendly and obliging to his relations and acquaintance, and extremely regular in his manners and conduct. In his satires he often censures the faults of the orators and poets of his time, without sparing Nero himself.

Auriculas asini quis non habet ?

We read there also these four verses, which are believed to be Nero's, and which he cites as an example of the tumid or bombastic style.

*Torva Mimalloneis implemunt cornua bombis,
Et raptum vitulo caput ablatura superbo
Bassaris, et lyncem Menas flexura corymbis
Evion ingeminat : reparabilis adsonat Echo.*

Boileau justifies himself by this example. "Let us examine Persius," says he, "who wrote in the reign of Nero. He does not confine himself to ridiculing the works of the poets of his time; he attacks the verses of Nero himself. For every body knows, and Nero's court knew, that the four verses *Torva Mimalloneis*, &c. which Persius rallies so severely in his first satire, were Nero's. However we do not find that Nero, all Nero as he was, inflicted any punishment upon Persius: that tyrant, the enemy of reason, and enamoured, as all know, of his own works, was however so much a gallant man, as to understand raillery in respect to his verses, and did not believe the emperor, on this occasion, ought to take upon himself what concerned the poet."

The work of Persius, in which refined morality, and a wonderful fund of sense, distinguished themselves every where, though of no great extent, has acquired him great glory and a glory of the most solid kind, says Quintilian. *Multum, et veræ gloriæ, quamvis uno libra meruit Persius.* It must however be owned, that the obscurity which prevails in his satires, exceedingly diminishes their merit. This made a certain person say, that since Persius would not be understood he would not understand him. *Si non vis intelligi, nec ego volo te intelligere.*

He died at only twenty-eight years of age, in the 62d year of our Lord, which was the 6th

¹ Lib. ix. c. 2.

² It is said he wrote at first, *Auriculas asini Mela res habet.*

year of Nero's reign. In gratitude to his master and friend Cornutus, he left him his library, which consisted of seven hundred volumes, a very considerable one in those days, with a great sum of money. Cornutus accepted the books, but gave the money to the heirs of Persius, who were his sisters.

JUVENAL.

I antedate the time of Juvenal here, in order to join these two satiric poets together.

Juvenal (*Decimus*, or *Decius Junius Juvenalis*) was of Aquinum in the kingdom of Naples. He lived at Rome about the end of Domitian's reign, and even in Nerva's and Trajan's. He acquired great reputation by his satires, of which sixteen are come down to us. He passed the greatest part of his life in the exercises of the schools, where he was famous for being a vehement declaimer:

Juvenal, élevé dans les cris de l'Ecole,
Poussa jusqu'à l'excès sa mordante hyperbole.

Boileau.

He, bred in hawling schools debate to wage,
Push'd to excess his hyperbolic rage

Julius Scaliger, who is always singular in his sentiments, prefers the force of Juvenal to Horace's simplicity. But all people of good taste agree, that the declamatory and bitter genius of Juvenal, is much inferior to the natural, delicate, and refined simplicity of Horace's satire.

In his seventh satire he had ventured to attack the comedian Paris, whose power was enormous at court, and who bestowed all offices both civil and military. *

Ille et militiæ multis largitur honorem,
Semestri vatum digitos circumligat auro,
Quod non dant proceres, dabit histrio.

The proud comedian did not suffer so offensive an attempt without resenting it. He caused Juvenal to be banished into Egypt, by sending him thither to command a body of troops encamped at the extremity of that country. After Domitian's death he returned to Rome, where he remained, as is judged from some of his satires, till the reign of Adrian.

It is believed that Quintilian, who made it his rule not to name any living author, means Juvenal, when he says that there are satiric poets of his time well worthy of esteem, and who will one day be very famous. *Sunt clari hodieque et qui olim nominabuntur.* †

It were to be wished, that, in reproving the

manners of others with too much severity, he had not shown, that he himself was void of modesty; and that he had not combated vices in a manner, that rather teaches the practice, than inspires the horror, of them.

LUCAN.

Lucan (*M. Annæus Lucanus*) was Seneca's nephew. The most celebrated of his works is his *Pharsalia*, in which he relates the war of Cæsar and Pompey. He abounds with fine thoughts, and there is great spirit and vivacity in his style: but Quintilian † thinks him rather to be reckoned among the orators than the poets. *Lucanus ardens, et concitatus, et sententiis clarissimus; et, ut dicam quod sentio, magis oratoribus quam poetis annumerandus.* To equal Lucan with Virgil, as some are willing to do, is not exalting Lucan, but showing little discernment. We may however say of him, that if years had ripened Lucan's genius, who perhaps was not twenty-six when he died, and added Virgil's judgment to his fire and sublimity, he might have been a consummate poet. Many of his poems are lost.

The life of Lucan, ascribed to Suetonius, accuses him of a light intemperate tongue, and particularly of having spoken of Nero, who loved him, in a manner capable of exasperating even a mild and rational prince. He was one of the first who entered into Piso's conspiracy, out of resentment to Nero, who, through mean jealousy, suppressed the reputation of his poems, and prevented him from publishing them. ‡ That prince ordered Lucan to be put to death, and his veins were opened. When he perceived the warmth abandon the extremities of his body, remembering that he had formerly described a soldier expiring in that manner, he repeated the verses that expressed his death, which were his last words: a frivolous consolation for a dying man, but worthy a heathen-poet. He died in the 63th year of the Christian era, and in the twelfth of Nero.

PETRONIUS.

Petronius (*Petronius Arbiter*) was of Provence, in the country near Marseilles, as Sidorius Apollinarius informs us, and lived, according to the more received opinion, in the reigns of Claudius and Nero.

We have of this author's works the remains of a satire, or rather of several satirical books

‡ Quintil. l. x. c. l.

‡ Lucanum propriæ causæ accendebant, quod famam carminum ejus premebat Nero, prohibueratque ostentare, vanus adsimulatione. Tacit. Annal. l. xv. c. 40.

* Vet. Juven. vit.

† Lib. x. c. l.

(Satyricon) which he composed both in verse and prose. This is a kind of romance in the same form as the satires, which Varro, as I have said before, had invented by mingling verse and prose, the serious with the gay, agreeably; and which he called *Menippea*, from Menippus the Cynic, who before him had treated grave subjects in a style of pleasantry and ridicule. These fragments are only an indigested collection of detached parts, taken from the papers of somebody, who had extracted what he liked best from Petronius without any order. The learned find in them extreme refinement and delicacy of taste, and a wonderful happiness in painting the different characters of those he introduces speaking. They observe however, though Petronius seems to have been a great critic, and a writer of a most exquisite taste, that his style does not entirely come up to the delicacy of his judgment; that it is not without some affectation; is too florid and elaborate; and that it degenerates even so early as his time from the natural and majestic simplicity of the golden age of Augustus. But were his style much more perfect, he would be still the more dangerous to his readers, from the obscenities with which he has filled his work.

It is doubted whether this Petronius be the same mentioned by Tacitus. That historian gives us the following picture of Petronius Turpilianus, which sufficiently agrees with the idea the reading of the work in question gives us of its author. "He was a voluptuous man, who passed the day in sleep, and the night in pleasures or business. As others acquire reputation by industry, he had made himself famous for his idleness. He did not pass however for a prodigal and a debauchee, like those who ruin themselves by excesses void of sense and taste, but for a man of a refined and learned luxury. All his words and actions were the more pleasing, as they carried with them, even when loosest, a certain air of negligence peculiar to him, which as it seemed nature itself, had all the charms of simplicity. Notwithstanding, when he was proconsul of Bithynia, and afterwards when consul, he discovered a capacity for the greatest employments. Returning after to a voluptuous life, either out of inclination or policy, because the prince loved debauch, he became one of his principal confidants. It was he who regulated every thing in Nero's parties of pleasure; who thought nothing agreeable nor in taste, which Petronius had not approved. This excited the envy of Tigellinus against him, as a dangerous rival, that excelled himself in the knowledge of pleasures, and the science of voluptuousness."¹

¹ Illi dies per somnum, nox officiis et oblectamentis vitæ transigebantur. Utque alios industria, ita hunc ignavia ad famam protulerat, habebaturque non ganeo et

Petronius killed himself to avoid the death, to which the emperor had condemned him upon a false accusation.

If this Petronius be not the writer intended here, so admirable a picture will at least serve to give us an idea of the style of Tacitus, of whom I shall have occasion to speak in the sequel.

SILIUS ITALICUS.

C. Silius Italicus rendered himself famous by his poem on the second Punic war. He was not born a poet, and study did not entirely supply what he wanted on the side of nature.² Besides, he did not apply himself to poetry, till after he had long exercised the function of an advocate at the bar, and had been consul, that is to say, in a very advanced and languid period of life.³

Whatever praises Martial bestows on him,⁴ he is not much esteemed as a poet: he is however deemed to excel all the writers of his time in purity of language. He follows the truth of history exactly enough, and lights may be found in his poem, though not his principal design, into things which passed in the times of which he writes; there being facts in him not to be found elsewhere.

What he says of Domitian, sufficiently shows, that he wrote in the reign of that prince, after the war with the Sarmatæ, in which that with the Daci may be included. He is believed to have died in the time of Trajan, in the year 100.⁵ He starved himself to death, not being able to bear the pain of an ulcer, which the physicians could not cure. Pliny observes, that Silius having retired into Campania upon account of his old age, did not quit his retreat to come to Rome, in order to congratulate Trajan upon his accession to the empire. That prince⁶ was highly praised for not being offended at such a liberty; and he for venturing to take it.

If our poet could not attain to a perfect imi-

profigitor, ut plerique sua haurientium, sed eruditio luxu. Ac dicta factaque ejus, quanto solutiora, et quondam sui negligentiam præferentia, tanto gratius in speciem simplicitatis accipiebantur. Proconsul tamen Bithyniæ, et mox Consul, vigentem se ac parum negotiis ostendit: deinde revolutus ad vitia, seu vitiorum imitationem, inter paucos familiarium Neroni adsumptus est, elegantie arbitri, dum nihil amicum et molle, nisi quod ei Petronius approbasset. Unde invidia Tigellini, quasi adversus æmulum, et scientia voluptatum potiorum. *Tacit. Annal.* l. xvi. c. 18.

² Scribebat carmina majore cura quam ingenio. *Plin.* Ep. 7. l. iii.

³ Martial Ep. 63. l. vii.

⁴ Perpetui nunquam moritura volumina Sili

Qui legis, et Latia carmina digna toga. *Ep.* 63. l. vii.

⁵ Plin. Ep. 7. l. iii.

⁶ Magna Cæsaris laus, sub quo hoc liberum fuit: magna illius, qui hac libertate ausus uti. *Plin.* *Ibid.*

tation of Virgil, at least it was impossible to carry respect for him higher than he did. When he had got possession of the place where Virgil's tomb stood,⁷ it became sacred, and a kind of temple to him. He celebrated that poet's birthday every year with greater joy and solemnity than his own. He could not suffer so venerable a monument to remain neglected in the hands of a poor peasant, and purchased it.

Jam propè desertos cineres, et sancta Maronis

Nomina qui coleret, pauper et unus erat.

Silius optata succurrere censuit umbræ :

Silius et vatem, non minor ipse, colit.

Martial. Epig. 50. l. xi.

Silius's work had lain buried for many ages in the dust of the library of St. Gal. Poggius found it there during the council of Constance, with many other manuscripts, as I have already observed elsewhere.

STATIUS.

Statius (*P. Statius Papinius*) lived in the reign of Domitian. Martial never mentions him, though they were contemporaries at Rome, which is believed to proceed from jealousy, because the extreme facility of Statius in making extemporary verses made him highly agreeable to Domitian.

We have two heroic poems of Statius: the *Thebaid* in twelve books, and the *Achilleid* in only two, because he was prevented by death from making an end of it.

His poems were highly esteemed at Rome in his time. Juvenal mentions the extraordinary crowding to hear them, and the applauses they received.

Curritur ad vocem jucundam, et carmen amicum

Thebaidos, lætam fecit cum Statius urbem,

Promisitque diem : tanta dulcedine captos

Adficit ille animos, tantaque libidine vulgi

Auditur.

Sat. 6. l. iii.

If we are to take the verses that follow these literally, and if they are not one of the hyperboles so common to Juvenal, they tell us that Statius was poor, and after having acquired great reputation by his *Thebaid*, was obliged to compose dramatic poems, and to sell them to the actors for the means of life.

—Sed cum fregit subsellia versu,
Eaurit, intactam Paridi nisi vendat Agaven.

Julius Scaliger affirms that no author, either

ancient or modern, comes so near Virgil as Statius, and makes no hesitation in giving him the preference to all the heroic poets, Greek or Latin, maintaining at the same time that his verses are better even than Homer's. Such a judgment shows that illustrious critic not to have had so much justness of taste, as erudition. The one often hurts the other.

Statius, as well as Lucan and Silius, has treated his subject rather like an historian than a poet, without confining himself to what constitutes the essence of a true Epic poem. As to his diction and versification, in too much endeavouring to rise and appear great, he gives into bombast, and becomes tumid.

VALERIUS FLACCUS.

As the reign of Augustus produced the most excellent of the Latin poets, that of Domitian has also given us the most considerable poets of the second class.

C. Valerius Flaccus Setinus Balbus. This poet was born at Setia, a town of Campania, but had fixed his abode at Padua. His heroic poem upon the voyage of the Argonauts in eight books is come down to us. It was begun in the reign of Vespasian, to whom it is inscribed; but the author was prevented from finishing it by a sudden death. The best judges have but an indifferent opinion of this work, because there are several things in it contrary to the rules of art, no grace and beauty, with a style, which, from affecting a greatness it wants nerve to sustain, becomes cold and languid. Quintilian says, however, that the Latin poetry had lost much by his death, which happened in the latter part of Domitian's reign. *Multum in Valerio Flacco nuper amisimus*.⁸ Martial writes to him as to his friend, and advises him to renounce poesy for the bar, and apply himself to something, by which more is to be got than by courting the muses, from whom he has nothing to expect, but unavailing wreaths and barren praise, attended with want and misery.

Pierios differ cantusque chorosque Sororum :

Æa dabit ex illis nulla puella tibi—

Præter aquas Helicon, et sarta, lyrasque dearium,

Nil habet, et magnum sed perineane sophos.

Ep. 76. l. i.

MARTIAL.

Martial (*M. Valerius Martialis*) succeeded in the epigram. He was a Spaniard of the city of Bilbilis, which is said to have been not far from that of Caltainda in Arragon. He was born in the time of Claudius, and at the age of

⁷ Cujus (Virgilii) natalem religiosius quam suum celebrabat; Neapoli maxime, ubi monumentum ejus adire ut templum solebat. *Plin. Ep.* 7. l. iii.

⁸ Lib. 10. c. 1.

twenty came to Rome in Nero's reign, where he staid thirty years, beloved by the emperors, and in particular by Domitian, who conferred many favours upon him. It is believed, that his not being so well treated after the emperor's death, induced him to retire into his own country. He had full time there to grow weary of it, for want of good company, and such as had a taste for polite learning, which made him often think of his residence at Rome with regret. For instead of his verses being exceedingly admired and applauded, as they were in that learned city, at Bilbilis they only excited envy and slander against him; a treatment very hard to bear every day with patience. *Accedit his municipalium rubigo dentium, et iudicii loco livor—adversus quod difficile est habere quotidie bonum stomachum.*¹ He died in the reign of Trajan, about the year of Christ 100.

Fourteen books of epigrams and one upon shows remain of his writings. Vossius believes the latter a collection of Martial's verses, and those of some other poets of his time upon the shows exhibited by Titus in the year of Christ 80.

Pliny, in honour of whom he had composed an epigram, (the 19th of the 10th book) gave him a sum of money when he retired from Rome:² for he had made but small acquisitions in respect to the goods of fortune. Pliny on this occasion observes, that it was anciently the custom to confer rewards either of profit or honour upon those who had celebrated the glory of cities, or certain illustrious persons. At present, says he, that fashion is expired, with others no less great and noble. When we left off doing actions worthy of praise, we began to despise it: (if not with justice, at least with reason; for it reproached our want of merit.) *Postquam desinimus facere laudanda, laudari quoque ineptum putamus.* He lamented the death of Martial, when he was informed of it, and loved and esteemed his genius: but it were to be wished that his verses had always been as chaste and modest, as they are sometimes witty. He is reproached for too much bitterness and ill-nature, his shameful flattery of Domitian, and his unworthy treatment of him after his death.

The love of subtleties or witticism, and the affectation of points in discourse, had from the time of Tiberius and Caligula, taken place of the fine taste that prevailed in the reign of Augustus. Those defects increased perpetually, which occasioned Martial's pleasing so much. All his epigrams are far from having the same force and spirit; to which this verse of his own has been justly applied:

Sunt bona, sunt quedam mediocritia, sunt mala plura.
Some good, some tolerable, but more bad.

And indeed most of them are bad; he has however some that are excellent: of which I shall give the reader the following examples.

Upon an Excellent Piece of Sculpture.

Artis Phidiacæ toreuma clarum
Pices adipicis: adde aquam, natabunt. Ep. xlv. l. 1

Upon the Slowness of a Barber.

Eutrapelus tonsor dum circuit ora Lupercl,
Expingitque genas, altera barba subit.
Ep. lxxxiii. l. 1

Advice to a Person not to go to Law.

Et iudex petit, et petit patronus:
Solvās censeo, Sexte, creditori. Ep. xli. l. 2

A judge, you say,—and patron you must get?
Take my advice, good Sextus; pay the debt.

Upon the sudden death of one who had often been victorious in the Races of the Circus.

Ille ego sum Scorpūs, clamosi gloria Circi:
Piausus, Roma, tui, delicisque breves:
Invida quem Lachesis raptum triesterie nona,
Dum numerat palmas, credidit esse senem.
Ep. ii. l. 10

Upon the bold action of Mucius Scaevola.

Dum peteret Regem decepta satellite dextra,
Injecit sacris se peritura focis.
Sed tam sæva pius miracula non tulit hostis,
Et raptum flammis jussit abire virum.
Urere quam potuit contempto Mucius igne,
Hanc spectare manum Forsena non potuit.
Major deceptæ fama est et gloria dextra:
Si non erasset, fecerat illa minus. Ep. xxii. l. 1

Against the inhumanity of a Corveton rich Man.

Tu spectas hiemem succincti lentus amici,
(Præ scelus!) et lateris frigora trita mei.
Quantum erat, infelix, pannis fraudare duobus,
(Quid reuis?) non te, Navole, sed tinea?
Ep. xlv. l. 2

No riches are in reality saved but those we give away.

Callidus effracta nummos fur auferet arca:
Prosternet patrios impia flamma lares—
Extra fortunam est quicquid donatur amicis:
Quas dederis, solas semper habebis opes.
Ep. xlii. l. 8

Praise and description of a little bitch. It is somewhat long, but of exceeding delicacy, and I could wish, for the sake of the ladies, that some able hand would translate it into our language in verse.

Issa est passere nequior Catulli:
Issa est purior osculo columbe:

¹ Martial in Pref. l. xii.

² Plin. Ep. 11. l. iii.

Issa est blandior omnibus puellis :
 Issa est carior Indiciis lapillis :
 Issa est delicæ catella Publi.
 Hanc tu, si queritur, loqui putabis.
 Sentit tristitiamque gaudiumque.
 Collo nixa cubat, cæpitque somnos,
 Ut suspiria nulla sentiantur :
 Et desiderio coacta ventris,
 Gutta pallis non fefellit ulla ;
 Sed blando pede suscitât, toroque
 Deponi monet, et rogat levâri.
 Castæ tantus inest pudor catellæ !
 Ignorat Venerem, nec invenimus
 Dignum tam tenera virum puella.
 Hanc ne lux rapiat suprema totam,
 Picta Publius exprimit tabella.
 In qua tam similem videbis Issam,
 Ut sit tam similis sibi nec Issa.
 Issam demique pone cum tabella,
 Aut utramque putabis esse veram,
 Aut utramque putabis esse pictam.

Ep. cix. l. 4.

[For the sake of the ladies, as Mr. Rollin recommends it, the translator has attempted, or rather imitated this little poem in English measure, how unequally the comparison will best explain.

Pretty Issa, what can be,
 Of pretty things, compared to thee !
 Læbia's sparrow in its play
 Was not half so arch and gay :
 Issa's kisses sweeter far
 Than the billing turtle's are :
 Issa, fonder than the dove :
 Issa, kind as maids in love :
 India's gems with her compare,
 Gems and gold are not so rare :
 Cheap are those in Publius' sight ;
 Issa is his sole delight.

Issa has the art to trace ;
 Joy and sadness in a face ;
 And such notice seems to take,
 Issa, one would think, could speak.
 Whilst she sleeps, her neck sustaining,
 Not a breath her life explaining,
 Should a call of nature take her,
 No distresses rude can make her ;
 But soft-rising from her place,
 Not a drop to her disgrace,
 " Set me down," she tells you plain,
 And now, " take me up again."
 And so chaste's the little creature,
 One would think her not of nature :
 Never Venus, and her son
 To her spotless breast were known ;
 Nor a spouse could we provide
 Worthy of the tender bride.

Best death snatch her whole away,
 Grief to think ! at her last day,
 Publius does her picture take,
 Long to keep for Issa's sake :
 Issa there as like you see,
 As Issa can to Issa be :
 Issa by her picture place,
 Issa's two with every grace !
 Both painted seem, and both seem true ;
 They puzzle me, and so would you !]

SULPITIA.

Sulpitia, a Roman lady, was the wife of Calenus. She wrote a poem upon the expulsion of the philosophers, wherein she severely lashes Domitian, and menaces him with death. It is the only one of a great number of poems composed by her, that has come down to us, and is usually printed at the end of Juvenal's satires. We have reason to regret the loss of the verses she inscribed to her husband upon conjugal love, and the chastity and fidelity to be observed in the married state. Martial gives her great praise in one of his epigrams, of which I shall repeat only some verses.

Omnes Sulpitiam legant puellæ,
 Uni quæ cupiunt viro placere.
 Omnes Sulpitiam legant mariti,
 Uni qui cupiunt placere nuptæ—
 Hæc condiscipula, vel hæc magistra,
 Fases doctior et pudica Sappho.

Epist. 35. l. 10.

Imitated.

Ye tender brides, whom virtuous love inspires,
 Refine by wise Sulpitia your desires :
 She can the useful science well impart,
 To keep one happy married lover's heart :
 And you, whose'er desire one bride to charm,
 Yourselves with bright Sulpitia's dictates arm—
 With her conversant, by her lessons taught,
 Her lovely pupils rise, enlarged in thought ;
 Chaste and more learned Sapphos they become,
 Their sex's glory, and the pride of Rome.

NEMESIANUS AND CALPURNIUS.

We have some eclogues, and part of a poem upon hunting wrote by *M. Aurelius Olympius Nemesianus*, who was very famous in his time for his poetical works. We are told that he was a native of Carthage. He inscribes his poem upon hunting to Carinus and Numerianus after their father's death, that is to say in the year 284.

Titus Calpurnius of Sicily, lived in the reigns of Carus, Carinus, and Numerianus. He composed seven eclogues, which he inscribed to Nemesianus, a pastoral poet as well as himself. The verses of both these poets have the character of the age in which they were written.

PRUDENTIUS.

Prudentius, (*Aurelius Prudentius Clemens*) a Christian poet, and officer in the court of the emperor Honorius, was born at Saragosa in Spain in the year 348, and died about 412. He did not begin his poems upon religion till the fifty-seventh year of his age. He had been first an advocate, then a judge, afterwards a soldier,

and at last a retainer to the court in an honourable employment. He informs us himself of these circumstances in the prologue of his works.

Per quinquennia jam decem,
Ni fallor, fuimus: septimus insuper
Annum cardo rotat, dum fruimur sole volubili.

After having spoken of his youth he mentions his different employments.

Exin jurgia turbidos
Armarunt animos, et male pertinax
Vincendi studium subjacuit casibus aspera.
Bis legum moderamine
Frænos nobilium reximus urbium:
Jus civile bonis reddidimus, terribimus reos.
Tandem militiæ gradu
Evectum pietas principis extulit,
Adsumptum propius stare jubens ordine proximo.

The poems of Prudentius come down to us, abound more with zeal for religion than ornaments of art. They are full of false quantities; besides which he is not always orthodox in his notions. We must, however, confess, that there is considerable taste and delicacy in many passages of his works: his hymns upon the Innocents are sufficient proofs of this, from which I shall repeat some strophes.

Salvete flores martyrum,
Quos lucis ipso in limine,
Christi insecutor sustulit,
Ceu turbo nascentes rosas.
Vos prima Christi victima,
Grex immolatorum tener,
Aram sub ipsam simplices
Palma et coronis luditis—
Audit tyrannus anxius
Adesse regum principem,
Qui nomen Israel regat,
Tenetque David regiam.
Exclamat amens nuntio:
Successor instat, pellimur.
Satelles i, ferrum rape,
Perfunde cunas sanguine.
Transfigit ergo carnifex
Mucrone districto furens
Effusa nuper corpora,
Animaque rimatur novas.

The Augustan age has nothing more animated, nor more delicate, than these strophes.

CLAUDIAN.

Claudian, (*Claudius*), a Latin poet and a pagan, was a native of Egypt. He lived in the reign of Arcadius and Honorius, who caused a statue to be erected in honour of him. He died soon after Arcadius. He merits the first rank amongst the heroic poets, who appeared after the Augustan age. Of all those who have endeavoured to follow and imitate Virgil, none come so near the majesty of that poet, and

retain less of the corruption of the age he lived in, than he. He every-where shows abundance of genius, and that he was born a poet. He was full of that fire which produces enthusiasm. His style is correct, sweet, elegant, and at the same time noble and sublime. He has, however, too many flights and sallies of youth, and swells too much. He has wit and imagination, but is far from that delicacy of numbers, that natural and exquisite harmony of verse which the learned admire in Virgil. He rings perpetually the same round of measures, the same cadence, the effect of which is, that one can scarce read him without being tired. Of the several poems of Claudian, his invectives against Rufinus and Eutropius have been highly esteemed.

AUSONIUS.

Ausonius, (*Decius*, or rather *Decimus Magnus Ausonius*), was born at Bourdeaux. At the age of thirty he was chosen professor of grammar, and afterwards of rhetoric. He acquired so great a reputation in the latter employment, that he was sent for to the Imperial court, and made preceptor to Gratian the son of the emperor Valentinian I., (An. 367.) He accompanied his pupil in that young prince's journey with his father into Germany. This employment acquired him the highest dignities of the empire. He was made *questor* by Valentinian. After the death of that prince, Gratian made him *Præfectus Prætorio*; which office he had twice, first for Italy and Africa, and afterwards for the Gauls. He was at length declared consul, (An. 379,) at which time Juvenal's maxim was again verified, "That when fortune pleases, she makes a consul of a rhetorician."

Si fortuna volet, sis de rhetore consul.

The emperor, in conferring that dignity upon him, forgot nothing that could exalt the favour by the obliging and generous manner of doing it. To know how to improve gifts and graces thus, is a science worthy of a prince. He immediately despatched a courier to Ausonius with advice of his being nominated consul, and wrote to him in these terms.—"When I considered some time ago about the creation of consuls for this year, I implored the assistance of God, as you know it is my custom to do in whatever I undertake, and as I know it is your desire that I should. I believed it incumbent on me to nominate you first consul, and that God required that acknowledgment from me of the good instructions I have received from you. I

1 Auson. in Grat. act

therefore pay you what I owe you, and as I am sensible that we can never sufficiently discharge our obligations to our parents and masters, I confess myself still no less in your debt than I was before." That nothing might be wanting to the favour he did him, he accompanied this letter with the present of a very rich robe, in which the figure of the emperor Constantius, his father-in-law, was embroidered in gold. Ausonius, on his side, employed the whole force and delicacy of his genius in praising his august benefactor both in verse and prose. His oration of thanks to the emperor is still extant, and has been highly esteemed. There is a great deal of wit in it, perhaps too much; with fine and solid thoughts, and sprightly turns, but often far-fetched and too much studied. The Latinity of it is hard, and speaks the age in which the author lived. That the reader may have some idea of his style, I shall repeat here the beginning of this speech, which he pronounced before the emperor.—"Ago tibi gratias, Imperator Auguste: si possem, etiam referrem. Sed nec tua fortuna desiderat remunerandi vices, nec nostra suggerit restituendi facultatem. Privatorum ista copia est, inter se esse munificos. Tua beneficia, ut majestate præcellunt, ita mutuum non repescunt. Quod solum igitur nostræ opis est, gratias ago, verum ita, ut apud Deum fieri solet, sentiendo copiosius, quam loquendo; atque non in sacrario modò Imperialis oraculi, qui locus horrore tranquillo et pavore venerabilis rarò eundem animum præstat et vultum: sed usquequaque gratias ago, tum tacens, tum loquens; tum in cœtu hominum, tum ipse tecum; et cùm voce potui, et cùm meditatione secessi; omni loco, actu, habitu, et tempore. Nec mirum, si ego terminum non statuo tam grata profitemdi, cùm tu finem facere nescias honorandi. Qui enim locus est, aut dies, qui non me hujus aut similis gratulationis admoneat! Admoneat autem! O inertiam significationis ignavæ! Quis, inquam, locus est, qui non beneficiis tuis agitet, inflammet?"

There is an extreme inequality in the works of Ausonius. His style is stiff and hard, as I have already observed, but that stiffness, that roughness, is the least fault of his poems. The obscenities with which they abound, forbid the reading of them to every one who has not renounced all feelings of shame.

ST. PAULINUS.

St. Paulinus, bishop of Nola, was born at Bourdeaux, about the year 353. The celebrated Ausonius, of whom I spoke last, was his master in profane learning. St. Paulinus declares more than once that he was indebted for every thing to Ausonius, whom he calls his patron, master, father, and to whom he acknowledges

himself indebted for the progress he had made in learning, and his elevation to offices and dignities.

Tibi disciplinas, dignitatem, litteras,
Linguae, et togæ, et famæ decus,
Profectus, altus, institutus debeo,
Patrone, præceptor, parens.

Carm. 10.

He made a great progress under such a master. Ausonius congratulates him upon it in several of his poems, and owns, which is no small thing for a poet to allow, that his disciple carries the bays by his verses against him.

Cedimus ingenio, quantum præcedimus ævo.
Assurgit Musæ nostra Camena tum.

Auson. Epist. 20.

The retirement of St. Paulinus, who went into Spain to hide himself in solitude, drew upon him violent reproaches from Ausonius.* That worldly man wrote him many letters complaining of his injurious state of oblivion, and directing his severity particularly against his Tanaquil; by which odious name he means his wife Therasia, to whom he imputes that change. He accused his disciple of having lost his former good nature, and of having become morose, and a hater of mankind. He ascribes to him in terms sufficiently express—a mind perverted by spleen and melancholy, that induced him to fly the society and intercourse of men: the reproach usually made by persons of the world to those who quit it. Divine providence prevented him from receiving any of these letters, till he was strong enough to resist the snares which the devil laid for him by the hand of a late esteemed, and much beloved master. At the end of four years he received three of them, which he answered by several on his side. After having explained the reason of his long silence, he excuses himself from resuming the study of profane poetry, which did not suit a person like him, who had devoted his thoughts solely to God.

Quid abdicatas, in meam curam, pater,
Redire Musas præcipis?
Negant Camœnia, nec patent Apollini
Dicata Christo pectora.

He says that he is now no longer to invoke Apollo and the muses, divinities impotent and deaf; that a God more powerful has taken possession of his mind, and requires other sentiments and a different language from him—

Nunc alia mentem vis agit, major Deus,
Aliosque mores postulat.

* Id. Epist. xxiv. and xxv.

He afterwards describes the wonderful change operated by grace in the heart of man, when it has seized it by right of conquest, and has entirely subjected it to itself, in making it by a chaste and pure joy lose all taste for its former pleasures and worldly delights; in extinguishing all the pains and disquiet of the present life by a lively faith and hope of future happiness; and in leaving it no other care, than to employ itself with its God; in contemplating his wonderful works, in studying his holy will, and endeavouring with all the powers of the soul to render him an homage worthy of him by an undivided love that knows no bounds.

Hic ergo nostra ut suum præcordiis
Vibraverit cælo jubar,
Abstergit ægrum corporis pigri situm
Habitumque mentis innovat.
Exhaurit omne quod juvabat antea,
Castæ voluptatis vice.
Totoque nostra jure domini vindicat
Et corda, et ora, et tempora.
Se cogitari, intelligi, credi, legi,
Se vult timeri et diligi.
Æstus inanes, quos movet vitæ labor
Præsentis ævi tramite,
Aboluit futuræ cum Deo vitæ fides, &c.

To all this he adds a strong protestation never to be wanting in what his obligations to Ausonius required of him.

The praises which Ausonius gives St. Paulinus in many places, seems rather to regard the poems he composed before his renouncing the profane muses, than those he wrote after. For, after so uncommon and generous an abdication, he studied to extinguish the greater part of his fire; and having stifled in himself all desire of worldly reputation, he checked and neglected his genius and style, and confined himself within the bounds of a simplicity averse to all pride, and such as the Christian modesty requires. He carried this departure from the poet so far, as to disregard even the rules of prosody. But with all the air of negligence, that appears no less in his versification than in the general style of his poems, we always find certain natural charms and beauties, which makes us love the author and his works.

ST. PROSPER.

St. Prosper was of Aquitaine. He was married, and a layman, and secretary of the briefs, to St. Leo the Pope.

Besides several other little pieces, which are dubious, we have a considerable poem of St. Prosper's against the ungrateful, that is to say, against the enemies of the grace of Jesus Christ, wherein as a profound theologian, he explains the doctrine of the church against the Pelagians and Semipelagians. Mr. Godeau, after many

other authors, judges this work an abridgment of all St. Augustin's books upon this subject, and particularly of those which he wrote against Julian. He adds, that the expressions are wonderful, and that in many places, there is reason to be amazed how it was possible for this saint to unite the beauty of versification with the severity of his subject. What is besides surprising in this poem, is to see the exact regularity with which the maxims of the faith are observed in it, notwithstanding the constraint of verse, and the freedom of the poetic spirit; and that the truths of religion are neither altered nor weakened by the ornaments of poetry. This poem has been translated into French verse. I shall give the preface of it a place here, which will show both the subject of this excellent work, and the style of its author.—

P R E F A T I O.

Unde voluntatis sanctæ substat origo,
Unde animis pietas inquit, et unde fides:
Adversum ingratos, falsa et virtute superbos,
Centenis decies versibus excolui.
Quos si tranquilla studeas cognoscere cura,
Tutus ab adverso turbine, Lector, eris.
Nec libertate arbitrii rapiere rebellis,
Ulla nec audebis dona negare Dei.
Sed bona quæ tibi sunt, operante fidebere Christo,
Non esse ex merito sumpta, sed ad meritum.

FRENCH TRANSLATION.

Ma plume en mille Vers combattant pour la Grâce,
A pour Dieu combattu,
Attaquant ces Ingrats pleins de la vaine audace
D'une fausse vertu.
J'ai fait voir d'où nos cœurs convoient la racine
D'un céleste dessein,
D'où la foi naît dans nous, d'où la vertu divine
Germe dans notre sein.
Si donc ton esprit calme, en lisant cet ouvrage,
N'y cherche que du fruit,
Ces Vers te sauveront du funeste naufrage
Où l'erreur nous conduit.
Tu n'élèveras point contre ton Roi suprême
Ta fière liberté,
Et tu ne croiras point mériter par toi-même
Les dons de sa bonté.
Mais tu reconnaitras que tu dois toute chose
Au Dieu qui t'est si doux;
Et que notre mérite est l'effet, non la cause
De sa Grâce dans nous.

THE SAME IN ENGLISH.

Whence holiness of will derives its birth,
Whence piety, and faith, illumine earth,
'Gainst men ungrateful, of false virtue vain,
I sing: a thousand verses form the strain.
If, reader, to such knowledge you aspire,
Search here, and gratify your good desire
From frantic error safe, the growth of pride,
These, if you study well, will be your guide:
Nor will you dare against the God of Grace
Rebellious human liberty to place:

Nor will you any of his gifts disown;
Nor think you merit, but by Him alone:
Whate'er is good in you, you here will trace,
Not as the cause, but the effect, of Grace.

SIDONIUS APOLLINARIS.

C. Sollius Apollinaris Sidonius was born at Lyons. His father was *praefectus pratorio*, and son-in-law of the emperor Avitus. We have twenty-four of his poems, which are usually printed with the nine books of his epistles. The age in which he lived is an excuse for the hardness and obscurity of his style, and the false quantities of his verses. He renounced poetry with secular things, and composed no verses after he was made bishop of Clermont in Auvergne, which happened in the year 472.

AVIENUS.

Rufus Festus Avienus lived in the reign of Theodosius the elder. This author translated the *Phaenomena* of Aratus, and the *Περὶ γένεως* of Dionysius, that is to say, his description of the earth, into Latin verse. He had also turned all Livy into Iambics: a work useless enough, and of which the loss is only to be regretted, as it contained the substance of that excellent historian's matter not come down to us. There are fables of his extant, which he made into elegiac verse from Æsop, and dedicated to Theodosius, who is in reality Macrobius: they are very far remote from the purity, beauty, and elegance of Phædrus.

BÆTIUS.

Bætius (*Anicius Manlius Severinus Bætius*) was sole consul in the year 510. What verses this great man made, are inserted in his five books *De Consolatione Philosophiæ*, which he composed in the prison, where Theodoric king of the Goths, whose prime minister he was, confined him. His prose, which is not the most excellent, seemed to have contributed like shades in painting, to exalt the beauties of his poetry, that abounds with grave sentences and fine thoughts.

FORTUNATUS.

Fortunatus was born in the marquisate of Trevisano. He was made bishop of Poitiers, and died about the beginning of the seventh century. He is one of the most considerable of the ancient Christian poets. We have eleven books of his miscellaneous poems in lyric and elegiac verse; and four of the *Life of St. Martin* in hexameters. The merit of his verses is to be judged from the age in which he lived.

CHAPTER II.
OF HISTORIANS.

HISTORY has with reason been called the evidence of time, the light of truth, the school of virtue, the depository of events, and, if the expression may be allowed, the faithful messenger of antiquity. And indeed it opens to our view the vast series of all past ages, and brings them in a manner down to our own times. It makes conquerors, heroes, princes, and all other great personages, appear before us; but without the pompous train which attended them during their lives, and reduced to their own persons, in order to render an account of their actions at the tribunal of posterity, and submit to a judgment, in which flattery has no longer any part, because they have no longer any power. History has also the privilege of approaching the thrones of the princes that reign, and is almost the only counsellor, who either can or dare impart truth to them, and even show them their faults if they have any, but under foreign names, to spare their delicacy, and to render its advice useful by avoiding to give them offence. It is no less intent upon the instruction of private persons. It sets before all in general, of whatsoever age or condition they be, both the models of virtue they are to follow, and the examples they ought to shun.

It is easy to conceive, that history, while artless and rude in its infancy, was not capable of rendering these important services to mankind. It contented itself at first with preserving the remembrance of events, by carving them upon stone and brass, in fixing them by inscriptions, by inserting them into public registers, and by consecrating them in some measure in hymns and songs of religion. It rose by degrees, till at length it attained that height of perfection, to which the Greek and Latin writers carried it.

I shall say nothing of the history of the people of God, composed by Moses, the most ancient and venerable of all histories: neither shall I speak of several historians, whose names only, or at most some small fragments of their writings, have come down to us. I shall confine myself here to the Greek and Latin historians whose works, either in whole or in part, are still extant. As I have taken care to quote them exactly in my *Ancient History*, and as they are my authorities for what I advance there, it seemed necessary, that such of my readers as have not been conversant with them, should have some small knowledge of them, and know at least the times in which they lived, the principal circumstances of their lives, the works they composed, and the judgment passed on them by the learned.

ARTICLE I.

Of the Greek Historians.

SECT. I.

HERODOTUS.

Herodotus was of Halicarnassus, a city of Caria. He was born in the same year Artemisa queen of Caria died, and four years before the descent of Xerxes upon Greece, A. M. 3520, Ant. J. C. 484.¹ Seeing his country oppressed by the tyranny of Lygdamis, Artemisa's grandson, he quitted it, and retired into the Isle of Samos, where he learned the Ionic dialect perfectly. It was in this dialect he composed his history in nine books. He begins it at Cyrus, according to him first king of Persia, and continues it to the battle of Mycale, fought in the eighth year of Xerxes, which includes an hundred and twenty years under four kings of Persia, Cyrus, Cambyzes, Darius, and Xerxes, from the year of the world 3405 to 3524. Besides the history of the Greeks and Persians, which are his principal subjects, he treats that of several other nations, as the Egyptians, which takes up his second book. In the work of his which we have, he cites his histories of the Assyrians and Arabians;² but nothing of them is come down to us, and it is even doubted whether he finished them, because they are not mentioned by any author. The Life of Homer, ascribed to Herodotus, is not believed to be his.

Herodotus, in order to make himself known to all Greece at one and the same time, chose to make his appearance at the Olympic games, and read his history there, which was received with great applause.³ The style in which it is wrote seemed so sweet and flowing, that the audience thought they heard the muses themselves; and on that account, the names of the muses were afterwards given to the nine books of which the history consists. It appears, that he gave a particular reading of his work to the city of Athens, which well deserved that distinction: this was at the celebrated feast of the *Panathenæa*. It is easy to judge how highly a history, composed with so much art and eloquence, must have pleased such refined and delicate ears, and wits so curious, and of so exquisite a taste, as those of the Athenians. It is believed to have been rather at this assembly, than the Olympic games, that Thucydides, then very young, perhaps about fifteen, was so much affected with the beauty of this history,⁴ that he was seized

with a kind of transport and enthusiasm, and shed tears of joy in abundance. Herodotus perceived it, and complimented Olorus, the father of the youth, upon that occasion; exhorting him in the strongest terms to take particular care of a son, who already showed so extraordinary a taste for polite learning, and who might one day be the honour of Greece. Great persons cannot be too attentive in encouraging young men by just praises, in whom they observe fine talents, and generous inclinations. It is perhaps to these few words of Herodotus, that the world is indebted for the admirable history of Thucydides.

I have said, that Thucydides might be about fifteen when he was present at the reading of Herodotus's history at Athens. Suidas says, that he was then only a child, or rather very young, *ἦν ἄρτι*. As he was born but thirteen years after Herodotus, the latter himself in consequence could not at that time be above twenty-eight, which highly adds to the merit of that author, who at that age had composed so valuable a work.

Herodotus, crowned with glory, thought of returning into his own country; whither the heart always recalls us. When he arrived there, he exhorted the people to expel the tyrant that oppressed them, and to reinstate themselves in the possession of their liberty, dearer to the Greeks than life itself. His remonstrances had all the success that could be expected, but met with no other reward than ingratitude, through the envy so glorious and successful an enterprise drew upon him. He was obliged to quit an ungrateful country, and thought proper to take the advantage of an opportunity that offered itself very favourably. The Athenians were at this time sending a colony to Thurium, in that part of Italy called *Græcia Major*, to inhabit and repeople that city. He joined this colony, and went with it to settle at Thurium, where he ended his days. Thurium was the ancient Sybaris, or at least that city was built in the neighbourhood of Sybaris, and the remaining people of that ancient place, ruined by the Crotoniatæ, were settled there.

I defer speaking of the judgment to be passed on Herodotus, till I have gone through the article of Thucydides, in order to compare them with each other.

SECT. II.

THUCYDIDES.

The birth of Thucydides is dated in the 77th Olympiad, thirteen years after that of Herodotus, A. M. 3533, Ant. J. C. 471. His father was Olorus (so called from a king of Thrace)

¹ Suidas.² Lib. l. c. 184.³ Suidas.⁴ Marcellin. de vit. Thucyd. Suidas.

and his mother Hegesipyle.⁵ One of his ancestors was the ancient Miltiades, the son of Cypselus, the founder of the kingdom of the Thracian Chersonesus, who having retired into Thrace by the consent of Pisistratus, there married Hegesipyle the daughter of Olorus king of Thrace, whose daughter of the same name was very probably the mother of our historian. He studied rhetoric under Antiphon, and philosophy under Anaxagoras. He speaks of the first in his viii. book,⁶ and says, that he was for abolishing the popular government, and establishing that of the four hundred at Athens. We have already said, that at the age of fifteen he had heard Herodotus's history read with extreme pleasure, either at Olympia, or Athens. As he had a violent inclination for study, he had no thoughts of concerning himself in the administration of the public affairs; and only took care to form himself in the military exercises that suited a young man of his birth. He was employed in the army, and made some campaigns. At twenty-seven he was joined in commission for conducting and settling a new colony of Athenians at Thurium, A. M. 3560. Ant. J. C. 444. He passed three or four years in that employment, after which he returned to Athens. He then married a very rich wife of Thrace, who had a great number of mines in that country. By this marriage his circumstances were rendered easy, and he obtained the means of expending considerable sums. We shall soon see the good use he made of this advantage.

In the meantime the Peloponnesian war broke out, and occasioned great revolutions and troubles in Greece, A. M. 3573. Ant. J. C. 431. Thucydides, who foresaw that it would be of long duration, and attended with important events, formed from the first the design of writing the history of it.⁷ It was necessary for this purpose to have the most faithful and certain accounts, and to be informed to the most minute circumstances of all that passed on both sides in every expedition and campaign. And this he effected in an admirable manner that has few examples. As he served in the troops of Athens, he was an eye-witness of what passed in the army of the Athenians till the eighth year of that war, that is to say, till the time of his banishment, of which this was the occasion, A. M. 3580, Ant. J. C. 424.⁸ He had been commanded to go to the relief of Amphipolis upon the frontiers of Thrace, a place of great importance to both parties. Brasidas, general of the Lacedæmonians, marched thither first, and took the place. Thucydides

on his side took Elone upon the river Strymon. This advantage, which was inconsiderable to Athens in comparison with the loss of Amphipolis, was looked upon as nothing. His having failed of relieving Amphipolis through want of expedition, was made a crime, and the people, at the instigation of Cleon, punished his pretended fault by sentence of banishment.

Thucydides made his disgrace conduce to the preparation and execution of the great design he had formed of composing the history of this war. He employed the whole time of his banishment, which continued twenty years, in collecting his materials with more diligence than ever. His residing sometimes in the country of Sparta, and sometimes in that of Athens, extremely facilitated the inquiries he had to make. He spared no expense for that purpose, and made great presents to the officers on both sides, in order to his being informed of all that passed in the two armies. He had taken the same method whilst in the service.

The Athenians, after the expulsion of the thirty tyrants by Thrasybulus, permitted all the exiles to return, except the Pisistratides, A. M. 3601, Ant. J. C. 403. Thucydides took the benefit of this decree, and returned to Athens after a banishment of twenty years, at the age of sixty-eight. It was not till then, according to Mr. Dodwell, that Thucydides actually applied himself to the composition of his history, of which he had hitherto been collecting and disposing the materials with incredible care. His subject, as I have already observed, was the famous Peloponnesian war, which continued twenty-seven years. He carried it down no farther than the twenty-first inclusively. The six years which remained were supplied by Theopompus and Xenophon. He used the Attic dialect in his history, as the purest, and most elegant, and at the same time the most nervous and emphatical: besides which it was the idiom of Athens his country. He tells us himself, that in writing it, his view was not to please, but to instruct his readers.⁹ For which reason he does not call his history a work composed for ostentation, ἀνένημα, but a monument to endure for ever, ἀνάμνησις τοῦ αἵματος. He divides it regularly by years and campaigns. There is a French translation of this excellent historian by Mr. D'Ablancourt.

Thucydides is believed to have lived thirteen years after his return from banishment, and the end of the Peloponnesian war. He died A. M. 3613, Ant. J. C. 391., at the age of fourscore and upwards, at Athens according to some, and in Thrace according to others, whence his bones were brought to Athens. Plutarch says, that the tomb of Thucydides was shown

⁵ Marcellin. de vit. Thucyd. Suidas.

⁶ Thucyd. l. viii. p. 502.

⁷ Thucyd. l. v. p. 561.

⁸ Thucyd. l. iv. p. 321.

⁹ Thucyd. l. i. pp. 15, 16.

in his time within the monument of Cimon's family.¹

Comparison of Herodotus and Thucydides.

Dionysius of Halicarnassus, an excellent historian and critic, in a letter to Pompey the Great, compares Herodotus and Thucydides, the two most esteemed of the Greek historians, and expresses his judgment of them, as well in respect to history itself, as the style they use. I shall repeat in this place the principal points of this short dissertation: but we must remember that our critic is of Halicarnassus as well as Herodotus, which may perhaps give room to suspect him of some partiality to his countryman.

1. Matter of History considered.

The first duty of an author, who intends to compose a history, and to transmit the knowledge and remembrance of past actions to posterity, is, in my opinion, to make choice of a subject great, noble, and affecting; which by the variety and importance of facts, may render the reader attentive, and keep him always in a kind of busy suspense; and, lastly, engross and please him by the nature itself of the events, and the good success that terminates them.

Herodotus may indisputably in this point be said to take place of Thucydides. Nothing could be more agreeable and affecting than the subject chosen by the former. It is all Greece, jealous to the degree every body knows she was of her liberty, attacked by the most formidable power of the universe, which, with innumerable forces by sea and land, undertakes to crush and reduce her into slavery. It is nothing but victories upon victories, as well by sea as land, gained over the Persians by the Greeks, who, without mentioning the moral virtues carried to the highest degree of perfection, show all the valour, prudence, and military abilities, that can be expected from the greatest of captains. In fine, this war, so long and terrible, in which all Asia, departing out of herself and overflowing like a deluge, seems to make the total destruction of the little country of Greece inevitable, terminates with the shameful flight of Xerxes, the most powerful king of the earth, who is reduced to escape in a little boat, and with a success, that extinguishes for ever in the Persians all thoughts and desires of attacking Greece again with open force.

We see nothing of this kind in the choice Thucydides has made of his subject. He confines himself to a single war, which is neither

just in its principle, very various in its events, nor glorious to the Athenians in its success. It is Greece become frantic and possessed with the spirit of discord, that imbrues her hands in her own blood, arming Greeks against Greeks, allies against allies. Thucydides himself, from the beginning of his history, declares and gives his reader a view of all the evils, with which that unfortunate war would be attended: slaughter of men, plundering of cities, earthquakes, droughts, famine, diseases, plagues, pestilence, in a word, the most dreadful calamities. What a beginning, what a prospect is this! Is there any thing more capable of disgusting and shocking the reader?

Such is the first reflection of Dionysius of Halicarnassus, which, in my opinion, does not at all affect the merit of the writer. The choice of the matter, and the glorious success of a war, do not depend upon an author cotemporary with his subject, who is not master of his events, and who neither can nor ought to write any thing but what happens. He is unfortunate in being the witness of none but deplorable facts, but not the less excellent for that reason; which is at most a reproach, that will lie only against a tragic or epic poet, who disposes his matter at his own discretion. But as to an author, who writes the history of his own times, we have no right to require any thing of him, but that he should be true, judicious, and impartial. Is the sole end of history to delight the reader? Ought it not rather be to instruct him: and are not the great calamities, which are the necessary effects of bad passions and injustice, highly useful in teaching mankind to avoid them?

In the second place, it is very important for a writer to make a good choice of his point of view, in order to know where he is to begin, and how far carry on, his history. And in this Herodotus has succeeded wonderfully. He begins with relating the cause of the war declared by the Persians against Greece, which is the desire to revenge an injury² received above two hundred years before, and he concludes the relation of it with the exemplary punishment of the Barbarians. The taking of Troy could at most be only the pretext of this war, and what a pretext was it! The real cause was undoubtedly the ambition of the kings of Persia, and the desire of avenging themselves upon the Greeks for the aid they gave the Ionians. As for Thucydides, he begins his history with describing the unhappy situation of the affairs of the Greeks at that time; a first prospect little agreeable and affecting. He expressly imputes the cause of this war to the city of Athens; though

¹ In vit. Cim. p. 480.

² The destruction of Troy by the Greeks, which city was in alliance with Persia.

he might have ascribed it to the envy of Sparta, its rival from the time of the glorious exploits by which the Athenians had so highly distinguished themselves in the war with the Persians.

This second reflection of our critic seems still worse founded than the first. Thucydides might have advanced this pretext, but I do not know whether he could have done it with truth and justice: or rather one may positively affirm, that he could not advance it with any appearance of reason whatsoever. It is certain, if we may believe Plutarch, that the cause of the war ought to be imputed to the unbounded ambition of the Athenians, who affected universal dominion. It is noble in Thucydides, to have sacrificed the glory of his country to the love of truth: a quality in which the most essential merit and highest praise of a historian consist.

Thirdly, Herodotus, who knew that a long relation of the same matter, how agreeable soever it might be, would disgust, and become tedious to the reader, has varied his work, after the manner of Homer, by episodes and digressions, which add much to its beauty and the reader's pleasure. Thucydides, on the contrary, is always uniform and in the same tone, and pursues his subject without giving himself time to take breath; heaping up battles upon battles, preparations upon preparations, harangues upon harangues; parcelling out, to use that expression, actions by campaigns, which might have been shown in all their extent with more grace and perspicuity.

Dionysius Halicarnassensis seems here not to have had sufficient attention to the laws of history, and to have almost believed, that an historian might be judged of in the same manner as a poet. Many people blame Herodotus for his long and frequent digressions, as a considerable defect in point of history. I am far from agreeing with this opinion. They must have been very agreeable to the Greeks, at a time when the history of those different nations, of which they treat, was entirely unknown to them. But I am still farther from blaming the plan and conduct of Thucydides, who hardly ever loses sight of his subject: for this is one of the principal rules of history, from which a writer ought never to depart without the justest reasons.

Fourthly, Thucydides, religiously attached to truth, which ought to be the foundation of history, and which is certainly the first and most essential quality of a historian, inserts nothing fabulous in his work, has no regard to embellishing and enlivening it by relating facts and events of the marvellous kind, and does not, upon every occasion, introduce the gods and goddesses, acting by dreams, oracles, and prodigies. In this he is indisputably superior to Herodotus, who is little delicate and cautious in

respect to many facts which he advances, and is generally credulous even to weakness and superstition.

Fifthly, If we may believe Dionysius of Halicarnassus, there is in the writings of Thucydides a gloominess of character, and a natural roughness of humour, which his banishment had sharpened and exasperated. He is most exact in noting all the faults, and wrong measures, of the generals; and if he sometimes remarks their good qualities and successes, for he often passes them over in silence, he seems to do it with regret and against his will.

I do not know whether this censure be well founded; but my reading of Thucydides gave me no such idea of him. I perceived indeed that his matter was sad and gloomy, but not the historian. Dionysius of Halicarnassus discerns a quite different temper in Herodotus, namely, a character of kindness and good nature always equal to itself, with an extreme sensibility for the good and bad fortune of his country.

2. Elocution considered.

Several things may be considered in respect to elocution.

Purity, propriety, and elegance of language. These qualities are common to both our historians, who equally excelled in them, but always in adhering to the noble simplicity of nature. It is remarkable, says Cicero, that these two authors, who were cotemporary with the sophists, that had introduced a florid, trim, formal, artificial style, and whom Socrates for that reason called *λεροειδέες*, never gave into those minute or rather frivolous ornaments.*

Diffusion or brevity of style. These particularly distinguish and characterize them. The style of Herodotus is sweet, flowing, and more diffuse; that of Thucydides lively, concise, and vehement. "The one," to use Cicero's words, "is like a calm stream, whose waves flow with majesty; the other like an impetuous torrent; and when he speaks of war we seem to hear the trumpet sound. *Alter sine ullis salebris quasi sedatus amnis fluit: alter incitator fertur, et de bellicis rebus canit etiam quodammodo bellicum.*"⁴ Thucydides is so full of things, that with him the thoughts are almost equal in number to the words; and at the same time he is so just and close in his expressions, that one cannot tell

* Sophistas *λεροειδέες* appellat in Phædro Socrates — quorum astis arguta multa, sed minuta quedam — nimiumque depicta. Quo magis sunt Herodotus Thucydidesque mirabiles: quorum ætas cum in eorum tempora, quos nominamus, incidisset, longissime tamen ipsi à talibus deliciis, vel potius ineptiis abfuerunt. Cic. in *Orat.* n. 30.

⁴ *Orat.* n. 30.

whether it be the words that adorn the thoughts, or the thoughts the words." *Qui (Thucydides) ita creber est rerum frequentia, ut verborum propè numerum sententiarum numero consequatur : ita porro verbis aptus et pressus, ut nescias utrum res oratione, an verba sententiis illustrentur.*¹ This close, and in a manner abrupt, style, is wonderfully proper for giving strength and energy to discourse, but is generally attended with obscurity. And this is what has happened to Thucydides, especially in his harangues, which in many places are almost unintelligible. *Ipsa illa conciones ita multas habent obscuras abditasque sententias, vix ut intelligantur :*² So that the reading of this author requires an un-interrupted attention, and becomes a serious study. For the rest it is not surprising that Thucydides, as he alludes in his harangues to many circumstances well known in his time, and forgot afterwards, should have obscurities in the sense of readers so many ages removed from those events. But that is not the principal cause of them.

What has been said, shows what we are to think of our two historians in respect to the passions, which, as every body knows, prevail in, and constitute the principal merit of, Eloquence. Herodotus succeeds in those which require sweetness and insinuation, and Thucydides in the strong and vehement passions. Both have harangues, but they are less frequent and shorter in the first. Dionysius of Halicarnassus finds a defect in those of Thucydides, which is, that they are always in one and the same form and tone, and that the characters of the speakers are ill sustained in them; whereas Herodotus is much happier in those respects. Some persons blame harangues in history in general, and especially the direct. I have answered this objection elsewhere.

I shall conclude this article, which has become longer than I intended, with the elegant and judicious character Quintilian³ has drawn of our two authors, in which he includes part of what has hitherto been said. *Historiam multi scripsere, sed nemo dubitat duos longe ceteris preferendos, quorum diversa virtus laudem pene est parem consecuta. Densus, et brevis, et semper instans sibi Thucydides : dulcis, et candidus, et fusus Herodotus. Ille concitatis, hic remissis affectibus melior : ille concionibus, hic sermonibus : ille vi, hic voluptate.* "Greece has produced many famous historians; but all agree in giving the preference greatly to two of them, who by different qualities have acquired almost equal glory. Thucydides is close, concise, and always

hastening on⁴ to the point in view : Herodotus is sweet, perspicuous, and more diffused. The one is best for the vehement passions, the other for the soft and agreeable. The one succeeds in harangues, the other in common discourse. Force strikes us in the one, and pleasure charms us in the other." What, in my opinion, highly exalts the merit of Herodotus and Thucydides, is that both of them, with few models they could follow, carried history to its perfection by a different method. The general esteem of the ancients for these two authors, is a circumstance highly in their favour. So many great men could hardly be mistaken in their judgment of them.

SECT. III.

XENOPHON.

I have elsewhere treated with sufficient extent all that relates to the life and works of Xenophon; I shall only say a few words regarding them here, to recall the reader's remembrance of them, and their dates.

Xenophon, the son of Gryllus, was born at Athens in the third year of the 82d Olympiad, A. M. 3554, Ant. J. C. 450. He was something more than twenty years younger than Thucydides; and was a great philosopher, historian, and general. He engaged himself in the troops of young Cyrus, who marched against his brother Artaxerxes Mnemon king of Persia, in order to dethrone him, A. M. 3603, Ant. J. C. 401. This occasioned his banishment, the Athenians being at that time in amity with Artaxerxes. The retreat of the Ten Thousand under the conduct of Xenophon is known to every body, and has immortalized his fame. After his return, he was employed in the troops of Sparta, at first in Thrace, and afterwards in Asia, till Agesilaus was recalled, whom he accompanied as far as Bœotia. He then retired to Scyllonta, where the Lacedæmonians had given him lands, situate at no great distance from the city of Elis. He was not idle in his retirement. He took advantage of the leisure it afforded him to compose his histories. He began with the Cyropædia, which is the history of Cyrus the Great, in eight books. It was followed with that of Cyrus the younger, which includes the famous expedition of the Ten Thousand, in seven books. He then wrote the Grecian history in seven books also, which begins where Thucydides left off. It contains the space of almost forty-eight years, from the return of Alcibiades

¹ Lib. ii. de Orat. n. 56.

² Orat. n. 30.

³ Quintil. l. x. c. 1.

⁴ *Instans sibi* is hard to render : it means always pressing forward, hastening on to the end, tending perpetually to it, without either losing sight of it, deviating, or amusing himself in the least.

into Attica, to the battle of Mantinea. He also composed several particular tracts upon historical subjects.

His style, under an air of simplicity and natural sweetness, conceals inimitable graces, which persons of little delicacy of taste may not fully perceive and admire, but which did not escape Cicero, and which made him say, "That the muses seemed to speak by the mouth of Xenophon:" *Xenophontis voce musas quasi locutas ferunt.*⁵ Quintilian, in the praise he has left us of this author, has done little more than paraphrase that thought. *Quid ego commemorem Xenophontis jucunditatem illum in affectatam, sed quam nulla possit affectatio consequi? ut ipsæ finxissæ sermonem Gratia videantur: et, quod de Pericle veteris Comædiæ testimonium est, in hunc transferri justissimè possit, in labris ejus sedisse quandam persuadendi deam.*⁶ "What praises does not the charming sweetness of Xenophon deserve? so simple, so remote from all affectation, but which no affectation can ever attain. The Graces themselves seem to have composed his discourse; and what the ancient comedy said of Pericles may most justly be applied to him, that the goddess of persuasion dwelt upon his lips."

SECT. IV.

CTESIAS.

Ctesias of Cnidos was Xenophon's cotemporary. He was taken prisoner after the battle of young Cyrus with his brother Artaxerxes. Having cured the king of the wound he received in it, he practised physic in the court of Persia with great success, and continued near the person of that prince seventeen years.

He wrote the history of the Assyrians and Persians, in twenty-three books.⁷ One of the fragments preserved by Photius, (for we have nothing of Ctesias but fragments) informs us, that his six first books treated of the history of Assyria, and of all that had happened there before the foundation of the Persian empire: and that from the seventh to the thirteenth inclusively, he related at large the reigns of Cyrus, Cambyses, Magus, Darius, and Xerxes. He continued the history of the Persians down to the third year of the 96th Olympiad, at which time Dionysius the elder, tyrant of Syracuse, was making great preparations of war against the Carthaginians.⁸

He contradicts Herodotus almost in every thing, and is particularly industrious to render him discreditable.⁹ But his attempt has fallen

upon himself, and he is regarded by all the learned as a writer full of lies and unworthy of belief, as Aristotle calls him—*ψευδοῦς ἱστορικός*. He also differed very often with Xenophon in his accounts. It is surprising, that Diodorus Siculus, Trogius Pompeius, and some others, have chosen to follow Ctesias rather than Herodotus, and even than Xenophon. They were no doubt deceived by the assurance, with which he affirms, that he advanced nothing in his writings, of which he was not either an eyewitness himself, had been informed by the Persians concerned, or had extracted out of their archives.

SECT. V.

POLYBIUS.

I have already spoken of this celebrated historian in several parts of my history, and shall only add in this place what seems most necessary for giving the reader some idea of his character, actions, and works. His life, of sufficient extent and very well wrote, may be found annexed to the Chevalier Folard's translation of Polybius, of which I shall make great use, but not without abridging it considerably.

Polybius was of Megalopolis, a city of Peloponnesus in Arcadia. He came into the world about the 548th year from the foundation of Rome, A. M. 3800, Ant. J. C. 204. His father's name was Lycortas, famous for his constancy in supporting the interests of the Achæan league, whilst under his government. He was educated, like all the children of his nation, in the highest veneration for the Divinity: a pious opinion in which the Arcadians placed their principal glory, and in which he persevered with so much constancy during his whole life, that few profane authors have thought more religiously, or spoke with more dignity, of the Godhead than he. Lycortas his father, a profound statesman, was his master in politics; as Philopemen, one of the greatest and most intrepid captains of the ancient world, was in war. He reduced to practice the excellent lessons they had taught him in the different negotiations and affairs, wherein he was employed either jointly with his father or alone, especially during the war of the Romans with Perseus the last king of Macedonia, as I have observed in its place.

The Romans, after the defeat of that prince, in order to humble and punish such of the Achæans, as had been most warm in supporting the Achæan league, and had seemed most averse to their views and interests, carried away a thousand of them to Rome, A. M. 3837, Ant. J. C. 167: of which number was Polybius.

During his stay there, whether from his

5 Orat. n. 62.

6 Lib. x. c. 1.

7 Photius.

8 Diod. l. xiv. p. 273.

9 Photius.

reputation having gone before him, or his birth and merit having made the greatest persons of Rome desire his acquaintance, I know not, but he soon acquired the friendship of Q. Fabius, and of Scipio the younger, both sons of Paulus Æmilius, the one adopted by Q. Fabius, and the other by P. Cornelius Scipio, the son of the first Scipio Africanus. He either lent them his own, or borrowed books for them of others, and conversed with them upon the subjects of which they treated. Charmed equally with his great qualities, they prevailed with the prætor, that he should not leave Rome with the rest of the Achæans. What passed at that time between young Scipio, who was but eighteen, and Polybius, and which made way for the great intimacy they afterwards contracted, is, in my opinion, a most affecting piece of history, and may be of great instruction to young nobility. I have related this circumstance at the end of the history of the Carthaginians.

It is evident that Polybius composed the greatest part of his history, or at least collected his materials for it, at Rome. For where could he be better informed of the events which had passed, either during the whole course of the second Punic war, than in the house of the Scipios; or during the campaigns against Perseus, than in that of Paulus Æmilius? The same may be said in respect to all the foreign affairs, which occurred either whilst he was at Rome, or accompanied Scipio. As he was upon the spot either to see with his own eyes, or to receive news from the best informed, he could not fail of being exactly informed of every thing most memorable that happened.

The Achæans, after many fruitless applications to the senate, at length obtained the return of their exiles, A. M. 3854, Ant. J. C. 150: their number was then reduced to three hundred. Polybius did not use this permission to go home to Megalopolis, or if he did, it was not long before he rejoined Scipio, as he was with him three years after at the siege of Carthage. After this expedition, he made some voyages upon account of the history he had always in view. But how great was his grief, when in returning into Peloponnesus he saw Corinth burned and demolished, his country reduced into a province of the Roman empire, and obliged to submit to the laws of a foreign magistrate to be sent thither every year from Rome. If any thing could console him in so mournful a conjuncture, it was the opportunity his credit with the Romans gave him of obtaining some mitigations of the misfortunes of his country, and the occasion he had of defending the memory of Philopœmen, his master in the art of war, whose statues some were for pulling down. I have related this fact.

After having rendered his country many ser-

vices, he returned to Scipio at Rome, whence he followed him to Numantia, at the siege of which he was present, A. M. 3877, Ant. J. C. 127. When Scipio died he retired into Greece; (for what security could there be for Polybius at Rome, after Scipio had been put to death by the faction of the Gracchi?) and having enjoyed during six years in the bosom of his country, the esteem, gratitude, and affection of his dear citizens, he died at the age of fourscore and two, of a wound he received by a fall from his horse, A. M. 3883, Ant. J. C. 121.

His principal works are; the life of Philopœmen; a treatise upon the Tactics, or the art of drawing up armies in battle; the history of the Numantian war, of which Cicero speaks in his letter to Lucceius; and his universal history. Of all these works only the last remains, and that very imperfectly. Polybius himself calls it *Universal History*, not in respect of times, but of places, because it contained not only the wars of the Romans, but all that passed in the known world during the space of fifty-three years, from the beginning of the second Punic war to the reduction of the kingdom of Macedonia into a province of the Roman empire.

No history presents us, in so short a space of time, with so great a diversity of events, all of them decisive, and of the last importance. The second Punic war between the two most powerful and warlike people of the earth, which at first brought Rome to the very brink of destruction, and then, by a very surprising reverse of fortune, reduced the power of Carthage, and prepared the way for its final ruin; the war with Philip, whom the ancient glory of the Macedonian kings, and the name of Alexander the Great, still dreadful in some sense, rendered formidable; the war with Antiochus, the most opulent king of Asia, who drew after him great armies both by sea and land; and that with the Ætolians his allies, a warlike people, who pretended to give place to no nation in valour and bravery; and finally, the last Macedonian war with Perseus, which gave the fatal blow to that empire once so terrible, and to which the whole earth was too narrow:—all these events, within the space of little more than fifty years, gave the wondering world a sense of the Roman greatness, and showed it that Rome was destined to command all the nations of the universe. Could Polybius desire a greater, more magnificent, or more affecting subject of history? All the facts which happened in this space of time, composed thirty-eight books, in the front of which he had placed two, by way of introduction to the others, and of continuation to the history of Timæus. His own consisted there-

fore of forty books, of which we have only the five first as Polybius left them, and fragments, sometimes considerable enough, of the twelve that follow, with the *embassies*, and *examples of virtue and vice*, which the emperor Constantine Porphyrogenitus, in the twelfth century, caused to be extracted from Polybius' history, and to be inserted in his *Political Pandects*; a great collection, in which all that had been written by the ancient historians upon certain matters, were disposed under their several heads, and in which one might get instruction with regard to any particular circumstance in which one might be placed, without the trouble of reading all these historians. And this is the true use and great advantage of history, which, properly speaking, is the science of kings, generals, ministers of state, and of all who are employed in, or have any relation to, government. For men are always the same; they act in all ages upon the same principles, and the same springs almost always set states in motion, and occasion the various revolutions that happen in them. That prince was therefore very wise to conceive the design of establishing in his empire a kind of perpetual council, composed of the most prudent, the most experienced, and most profound persons of every kind, that the ancient world had produced. This design, so laudable in itself, proved however the great misfortune of all succeeding ages. As soon as it became the habit to consult only these abridgments, (to which our natural indolence and sloth soon lead us) the originals were considered as useless, and no farther pains were taken to copy them. The loss of many important works are ascribed to this cause; though other circumstances no doubt contributed also to it. The abridgments themselves, of which I am speaking, are a proof of this. Of fifty heads, which they contained at first, only two are come down to us. If they had been preserved entire, they might in some manner have consoled us for the loss of the originals. But all has undergone the common fate of human things, and leaves us only matter of regret.

What a misfortune is it that such an history as Polybius' is lost! Who ever was so attentive and exact in securing himself of the truth of facts as he? That he might not err in the description of places, a circumstance highly important in relating military affairs, as an attack, a siege, a battle, or a march, he went to them himself, and made a great number of voyages with that sole view.² Truth was his only view. It is from him we have this celebrated maxim, "That truth is to history, what eyes are to animals:" that as the latter are of no use without

sight, so history without truth is only amusing and unprofitable narration. But the facts may here be said to be the least we have to regret. What an irreparable loss are the excellent maxims of policy, and the solid reflections of a man, who, with a natural passion for public good, had made it his whole study; who during so many years had been present in the greatest affairs; who had governed himself, and whose government had given such general satisfaction! In these the principal merit of Polybius consists, which is what a reader of taste ought principally to look for in him. For, we must allow, that the reflections (I mean those of so wise a man as Polybius) are the soul of history.

His digressions are condemned. They are long and frequent, I confess; but they abound with such curious facts, and useful instructions, that we ought not only to pardon him that fault, if it be one, but think ourselves obliged to him for it. Besides, we should remember, that Polybius undertook the universal history of his own times, as he entitles his work; which ought to suffice in vindication of his digressions.

Dionysius of Halicarnassus, a critic of great reputation in the ancient world, has passed an opinion upon our historian, which gives us great reason to question his judgment in matters of criticism. Without any circumlocution he flatly tells us, that no patience is of sufficient proof to endure the reading of Polybius; and his reason for it is, because that author knows nothing of the disposition of words: that is to say, his history had not such round, flowing, numerous periods, as he uses himself, which is an essential fault in history. A military, simple, negligent style, is to be pardoned in such a writer as ours, who is more attentive to things, than to turns of phrase and diction.³ I shall make no scruple therefore to prefer the judgment of Brutus to that of this rhetorician, who, far from finding it tedious to read Polybius, was continually perusing him, and made extracts from him at his leisure hours. We find him employed in this manner the evening before the battle of Pharsalia.

SECT. VI.

DIONORUS SICULUS.

Diodorus was of Agyrium, a city of Sicily, whence he was called *Diodorus Siculus*, to distinguish him from several other authors of the same name. He lived in the time of Julius and Augustus Cæsar.

The title of his work is, *The Historical Library*. It contains the history of almost all

² Polyb. l. iii. p. 13.

³ Plut. in Brut. p. 965.

the nations of the world, whom he in a manner passes in review before his reader: Egyptians, Assyrians, Medes, Persians, Greeks, Romans, Carthaginians, and several more. It consisted of forty books, of which he gives us the plan and series in his preface. The six first, says he, contain what passed before the Trojan war, that is to say, all the fabulous times; in the first three are the antiquities of the Barbarians, in the other three those of the Greeks. The eleven that follow contain the history of all nations from the Trojan war to the death of Alexander the Great, inclusively. In the other twenty-three this general history is continued down to the beginning of the war with the Gauls, in which Julius Cæsar, after having subjected many very warlike nations of Gaul, extended the limits of the Roman empire to the British Isles.

Of these forty books, only fifteen remain, with some fragments, most of them preserved by Photius, and the extracts of Constantine Porphyrogenitus. The five first follow each other in their order. In the first, Diodorus treats of the origin of the world, and of what relates to Egypt. In the second, of the first kings of Asia, from Ninus to Sardanapalus; of the Medes, Indians, Scythians, and Arabians. In the third, of the Æthiopians and Libyans. In the fourth, of the fabulous history of the Greeks. In the fifth, of the fabulous history of Sicily, and the other islands. The sixth, seventh, eighth, ninth, and tenth books are lost. The following seven, from the eleventh to the seventeenth, inclusively, contain the history of ninety years, from the expedition of Xerxes into Greece to the death of Alexander the Great. The three following, the eighteenth, nineteenth, and twentieth, treat of the disputes and wars of Alexander's successors down to the disposition of the two armies for the battle of Ipsus. And there ends what remains of the history of Diodorus Siculus, in a very important part of it, and at the moment a battle is going to be fought, which decides the fate of Alexander's successors. In these last ten books, which properly include the continued history of the Persians, Greeks, and Macedonians, Diodorus introduces also the history of other nations, and in particular that of the Romans, according as its events concur with his principal subject.

Diodorus tells us himself in his preface, that he employed thirty years in composing his history, in which his long residence at Rome was of great use to him. Besides this he travelled over, not without frequent dangers, many provinces of Europe and Asia, to inform himself fully of the situation of the cities and other places of which he was to treat: which is no indifferent circumstance in respect to the perfection of history.

His style is neither elegant nor florid, but simple, clear, and intelligible: that simplicity has however nothing low and creeping in it. Though he does not approve of interrupting the thread of history with frequent and long harangues, he does not entirely reject the use of them, and believes they may be employed with great propriety, when the importance of the subject requires it.¹ After the defeat of Nicias, the Syracusans deliberated in their assembly upon the treatment it was proper to give the Athenian prisoners.² Diodorus repeats the harangues of two orators, which are long and very fine, especially the first. Neither his Chronology, nor the names either of the Archons of Athens, or of the consuls and military tribunes of Rome, into which many errors have crept, are to be relied on. Very solid and judicious reflections occur from time to time in this history. He takes particular care not to ascribe the success of wars, and other enterprises, to chance or blind fortune, with many other historians, but to a Wisdom and Providence which presides over all events. Every thing well weighed and considered, we ought to set a great value upon the works of Diodorus come down to us, and very much to regret the loss of the rest, which would have thrown great light upon every part of ancient history.

DIONYSIUS OF HALICARNASSUS.

The historian of whom we now speak, apprises us himself, in the preface of his work, that there is little known of his person and history. He was a native of Halicarnassus, a city of Caria in Asia Minor, the country of the great Herodotus. His father's name was Alexander, of whom nothing more is known. He arrived in Italy about the middle of the 187th Olympiad, at the time Augustus Cæsar terminated the civil war with Antony. He remained twenty-two years at Rome, which he employed in attaining the Latin tongue with great exactness, in studying the literature and writings of the Romans, and especially in carefully collecting materials for the work he had in view: for that seems to have been the motive of his voyage. In order to succeed the better in it, he contracted a great intimacy with all the most learned persons of Rome, with whom he frequently conversed. To their informations by word of mouth, which were of great use to him, he added a close application to the study of the Roman historians in greatest esteem, as Cato, Fabius Pictor, Valerius Antias, and Licinius Macer, who are often quoted by Livy. When he believed himself sufficiently informed

1 Diod. l. ix. p. 749

2 Ibid. l. xiii. p. 140—161.

in all that was necessary to the execution of his design, he applied himself to it. The title of his work is *The Roman Antiquities*, which he called it, because, in writing the Roman history, he traces it back to its most ancient origin. He continued his history down to the first Punic war, at which period he stopped, perhaps because his plan was to clear up that part of the Roman history which was least known. For, from the first Punic war, that history had been wrote by cotemporary authors in every body's hands.

Of the twenty books, which compose his *Roman Antiquities*, we have now only the first eleven, that come down no farther than the 312th year from the foundation of Rome. The nine last, which contained all that happened to the 468th according to Cato, and the 490th according to Varro, have perished through the injuries of time. Almost as often as we speak of any ancient author, are we obliged to deplore the loss of part of his works, especially when they are excellent, as were those of the writer in question.

We have also some fragments of his upon the subject of embassies, which are only detached and very imperfect pieces. The two heads of Constantine Porphyrogenitus which remain, have also preserved several fragments of this author. Photius, in his *Bibliotheca*, speaks of the twenty books of antiquities, as of a perfect work which he had read. He cites, besides, an abridgment, which Dionysius Halicarnassensis made of his history in five books. He praises it for its purity, elegance, and exactness; and makes no scruple to say, that this historian in his epitome has excelled himself.

We have two translations sufficiently recent of the history of Dionysius Halicarnassensis, which have each their merit, but of a different kind. It does not belong to me to compare them, or to give one the preference to the other. I leave that to the public, which has a right to pass judgment upon the works laid before it. I only propose to make great use of them in composing the Roman history.

Father Jay, the Jesuit, in the preface to his translation of Dionysius of Halicarnassus, gives us an idea and character of this author, to which it is hard to add any thing. I shall almost do no more than copy him, except it be in abridging him in some places.

All the writers, ancient and modern, who have spoke with any judgment of his history, discover in him facility of genius, profound erudition, exact discernment, and judicious criticism. He was versed in all the liberal arts and sciences, a good philosopher, a wise politician, and an excellent rhetorician. He has drawn himself in his work without designing it. We see him there a friend of truth, remote from all preju-

dice, temperate, zealous for religion, and a declared enemy of the impiety which denies Providence. He does not content himself with relating the wars abroad; but describes with the same care the transactions of peace, that conduce to good order at home, and to the support of union and tranquillity among the citizens. He does not tire the reader with tedious narrations. If he deviates into digressions, it is always to instruct him in something new and agreeable. He mingles his accounts with moral and political reflections, which are the soul of history, and the principal advantage to be attained from the study of it. He treats his matter with far more abundance and extent than Livy; and what the latter includes in his three first books, the Greek author makes the subject of eleven. It is certain that, without what remains of Dionysius Halicarnassensis, we should be ignorant of many things, of which Livy and the other Latin historians have either neglected to inform us, or speak of very superficially. He is the only writer that has given us a perfect knowledge of the Romans, and has left posterity a circumstantial account of their ceremonies, worship, sacrifices, manners, customs, discipline, triumphs, *Comitia* or assemblies, *Census* or the numbering, assessing, and distribution of the people into tribes and classes. We are indebted to him for the laws of Romulus, Numa, and Servius Tullius, and for many things of the like nature. As he wrote his history only to inform the Greeks, his countrymen, in the actions and manners of the Romans, which were unknown to them, he thought himself obliged to be more attentive and particular upon those heads than the Latin historians, who were not similarly situated.

As to the style which the Greek and Latin historians have used in their work, F. Jay contents himself with the judgment Henry Stephens passes upon it: "That the Roman history could not be better written than Dionysius of Halicarnassus has done it in Greek, and Livy in Latin." For my part I am far from subscribing to this opinion, which gives Dionysius of Halicarnassus a kind of equality with Livy, and seems to make them equal in point of style. I find an infinite difference between them in this respect. In the Latin author, the descriptions, images, and harangues, are full of beauty, force, vivacity, sublimity, majesty: in the Greek, every thing is weak, prolix, and languid, in comparison with the other. I could wish, that the limits of my work would admit me to insert here one of the finest facts in the history of ancient Rome; that is the combat of the Horatii and Curiatil, and to compare the two passages together. In Livy the reader believes himself actually present while they engage. At the first sight of their naked swords, the noise and

clash of their arms, and the blood streaming from their wounds, he finds himself struck with horror. He shares with the Romans and Albans their different emotions of fear, hope, grief, joy, which on both sides alternately succeed each other. He is continually in suspense, and anxiously waits the success, which is to decide the fate of the two people. The narration of Dionysius, which is much longer, gives the reader scarce any of these emotions. He runs it over in cold blood, without quitting his natural tranquillity and indifference, and is not in a manner transported out of himself by the violent agitations he feels from Livy on every change that happens in the fortune of the combatants. Dionysius of Halicarnassus may have several advantages over Livy in other respects; but, in my opinion, is by no means to be compared to him in respect of style.

PHILO. APlON.

Philo was a Jew of Alexandria, of the sacerdotal race, and descended from the most illustrious families of the whole city. He had studied the sacred writings, which are the science of the Jews, with great care. He acquired much reputation also by human learning and philosophy, especially that of Plato. He was deputed by the Jews of Alexandria to the emperor Caligula, to vindicate the right they pretended to have to the freedom of that city.

Besides many other works, according to Eusebius,¹ he wrote the sufferings of the Jews under Caligula, in five books. Only the two first have been preserved, of which the one has for its title *Embassy to Caius*. The three others are lost.² It is said that Philo in the reign of Claudius having read in the full senate his writings against the impiety of Caligula, they were so well approved, that they were ordered to be placed in the public library.

Apion, or Appion, was an Egyptian, born at Onis, in the most remote part of Egypt. But having obtained the freedom of Alexandria, he called himself a native of that place. He was a grammarian by profession, as those who excelled in human learning and the knowledge of antiquity were termed in those times. He was placed at the head of the deputies sent by the people of Alexandria to Caligula against the Jews of that city. He had been the pupil of Didymus, a celebrated grammarian of Alexandria.³ He was a man of great learning, and perfectly versed in the Grecian history, but very full of himself, and passionately enamoured of his own merit.

His history of Egypt is cited by authors, and contained almost whatever was most memorable in that famous country. He spoke very ill of the Jews in it, and still worse in another work, in which he had industriously collected all kinds of calumny against them.

The story of a slave called Androcles, who was provided with food during three years by a lion he had cured of a wound, and afterwards recognized by the same lion in sight of the whole city of Rome, when he was exposed to fight with wild beasts, must have happened about the time we speak of, because Apion, from whom Aulus Gellius quotes it, declared that he was an eye-witness of it.⁴ The slave, in consequence, was rewarded with his life and liberty, besides the lion. This fact is described at large in Aulus Gellius, and is worth reading.

JOSEPHUS.

Josephus was of Jerusalem, and of the sacerdotal race.⁵ He was born in the first year of Caligula, A. D. 37. He was so well instructed, that at the age of fourteen the Pontiffs themselves consulted him concerning the Law. After having carefully examined the three sects into which the Jews were then divided, he chose that of the Pharisees. At the age of nineteen he began to have a share in the public affairs. He sustained with incredible valour the siege of Jotaphat for almost seven weeks. That city was taken in the thirteenth year of Nero, and cost the Romans very dear. Vespasian was wounded in it. Forty thousand Jews were killed there; and Josephus, who had hid himself in a cave, was at last reduced to surrender himself to Vespasian.

I shall not relate all that passed from that time to the siege and taking of Jerusalem: he does it himself at large, to whom I refer the reader. I shall only observe, that during the whole war, and even whilst he continued captive, Vespasian and Titus always kept him near their persons; so that nothing happened of which he was not perfectly informed. For he saw with his own eyes all that was done on the side of the Romans, and set it down exactly; and was told by deserters, who all applied to him, what passed in the city, which no doubt he did not fail to note also.

It is more than probable that he learned the Greek tongue, after the taking of Jotaphat, and when he saw himself obliged to live with the Romans. He owns that he could never pronounce it well, because he did not learn it while young; the Jews setting little value upon the

¹ Euseb. l. ii. c. 5.

² Ibid. c. 18.

³ Suid. Aul. Gell. l. v. c. 14.

⁴ Aul. Gell. *ibid.*

⁵ Joseph. in *vita sua*.

knowledge of languages.* Photius judges his style pure.⁷

After the war, Titus went to Rome and took him along with him, A. D. 71. Vespasian caused him to be lodged in the house he lived in before he was emperor, made him a citizen of Rome, gave him a pension with lands in Judea, and expressed much affection for him as long as he lived. It was undoubtedly Vespasian who gave him the name of Flavius, which was that of his family, when he made him a Roman citizen.

In the leisure Josephus enjoyed at Rome, he employed himself in writing the history of the war with the Jews from the materials he had prepared before. He composed it first in his own language, which was almost the same as the Syriac. He afterwards translated it into Greek for the nations of the empire, tracing it back to the time of Antiochus Epiphanes and the Maccabees. Josephus makes profession of relating with entire veracity all that passed on both sides, reserving of his affection for his country, only the right of deploring its misfortunes sometimes, and of detesting the crimes of the seditious, who had occasioned its final destruction.

As soon as he had finished his history in the Greek, he presented it to Vespasian and Titus, who were extremely pleased with it. The latter afterwards was not contented with ordering it to be published, and placing it in a library open to every body; but signed the copy deposited there with his own hand, to show that he desired it might be from him alone that all the world should be informed of what passed during the siege, and at the taking of Jerusalem.

Besides the veracity and importance of this history, wherein we find the entire and literal accomplishment of the predictions of Jesus Christ against Jerusalem, and the terrible vengeance taken by God of that unfortunate nation for the death they had made his Son suffer, the work in itself is highly esteemed for its beauty. Photius's judgment⁸ of this history is, that it is agreeable, and full of elevation and majesty, without swelling into excess or bombast; that it is lively and animated, abounding with that kind of eloquence, which either excites or soothes the passions of the soul at pleasure; that it has a multitude of excellent maxims of morality; that the speeches in it are fine and persuasive; and that, when it is necessary to support the opinions of the opposite parties, it is surprisingly fruitful of ingenious and plausible reasonings on both sides. St. Jerome⁹ gives Josephus still higher praises in a single word, which perfectly

expresses his character, by calling him the *Livy* of the Greeks.

After Josephus had written the history of the destruction of the Jews, he undertook the general history of that nation; beginning at the creation of the world, in order to make known to the whole earth the wonderful works of God that occur in it. This he executed in twenty books, to which he gives the title of *Antiquities*, though he continues them down to the twelfth year of Nero, when the Jews revolted. It appears that he inscribed this work to Epaphroditus, a curious and learned man, who is believed to be the celebrated freedman of Nero, that Domitian put to death in the year 95. Josephus finished this work in the 56th year of his age, which was the 13th of Domitian's reign, A. D. 93. He declares¹⁰ in it that he neither adds to, nor diminishes anything of what is contained in the Holy Scriptures, from which he has extracted what he relates, till after the return of the Jews from the Babylonish captivity. But he has not kept his word so religiously as might be desired. He inserts some facts which are not in the Scripture, retrenches many others, and disguises some in a manner, that renders them merely human, and makes them lose that divine air, that majesty, which the simplicity of the Scripture gives them. Besides which, after having related the greatest of God's miracles, he is inexcusable for often weakening their authority by leaving every body at liberty to believe of them as they please.

Josephus was willing to annex the history of his own life to his *Antiquities*, whilst there were many persons still in being, who could have contradicted him, if he had departed from the truth. Accordingly it appears that he wrote it presently after them; and it is taken as part of the 20th book of his *Antiquities*. He employs almost all of it in relating what he did when governor of Galilee before the arrival of Vespasian.

As many persons declared they doubted what he said of the Jews in his *Antiquities*, and objected, that, if that nation were so ancient as he made it, other historians would have spoken of it; he undertook a work not only to prove, that many historians had spoken of the Jews, but to refute all the calumnies vented against them by different authors, and particularly Apion, of whom we have spoken; which occasions the whole work being usually called *Against Apion*.

No writings were ever more generally esteemed than those of Josephus. The translation of them appeared in our language at a time, when for want of better books, romances were the general study of the world. It contributed very much to abate that bad taste. And, indeed, we

⁶ Antiq. l. xi. c. 2.

⁸ Phot. c. 47.

⁷ Phot. c. 47.

⁹ Hieron. Ep. 22.

¹⁰ In præfat.

may easily conceive, that only persons of a wrong, light, superficial turn of mind could attach themselves to works, that are no more than the idle imaginations of writers without weight or authority, in preference to histories so fine and solid as those of Josephus. Truth alone is the natural nourishment of the mind, which must be distempered to prefer, or even compare, fiction and fable to it.

SECT. VII.

PLUTARCH.

Plutarch was born at Chæroneæ, a town of Bœotia, five or six years before the death of the emperor Claudius, A. D. 48, as near as can be conjectured. Bœotia was censured by the ancients as a country, that produced no men of wit or merit. Plutarch, not to instance Pindar and Epaminondas, is a good refutation of this unjust prejudice, and an evident proof, as he says himself, that there is no soil in which genius and virtue cannot grow up. He was descended from one of the best and most considerable families of Chæroneæ. The name of his father is not known: he speaks of him as a man of great merit and erudition. His uncle was called Lamprias, of whom he says, that he was very eloquent, had a fruitful imagination, and excelled himself when at table with his friends. For at that time his genius conceived new fire, and his imagination, which was always happy, became more lively and abundant: Plutarch has preserved this witty saying of Lamprias upon himself: "That wine had the same effect upon his wit, as fire upon incense; it made the finest and most exquisite parts of it evaporate."

Plutarch tells us, that he studied philosophy and mathematics at Delphi, under the philosopher Ammonius, during Nero's voyage into Greece, at which time he might be about seventeen or eighteen years old. The talents of Plutarch seem to have displayed themselves very early in his country. For while he was very young, he was deputed with another citizen upon an important affair to the proconsul.¹ His colleague having stopped on the way, he went forward alone, and executed their joint commission. At his return, when he was preparing to give an account of it to the public, his father taking him aside spoke to him to this effect: "In the report you are going to make, son, take care not to say, 'I went, I spoke, I did thus:' but always say, 'We went, we spoke, we did thus,' giving your colleague a part in all your actions, that half the success may be ascribed to him, whom his country honoured with an equal

share in the commission: by this means you may avoid the envy, which seldom fails to attend the glory of having succeeded." This is a wise lesson, but seldom practised by such as have colleagues, either in the command of armies, public administrations, or in any commissions whatsoever; in which it often happens, through a mistaken self-love, and a despicable and odious meanness of spirit, that men are for arrogating to themselves the honour of a success, to which they have only a right in common with their colleagues. They do not reflect, that glory generally follows those who fly it, and pays them back with great interest the praises they are willing to divide with others.

He made many voyages into Italy, on what occasion is not known. We can only conjecture with very good foundation, that the view of carrying on and making his lives of illustrious men as complete as possible, obliged him to reside more at Rome, than he would otherwise have done. What he says in the life of Demosthenes,² strengthens this conjecture. According to him, "a man who undertakes to collect facts, and to write an history consisting of events, which are neither in his own hands, nor have happened in his own country, but which are foreign, various, and dispersed here and there in many different writings; it is absolutely necessary for such a man to reside in a great and populous city, where good taste in general prevails. Such a residence puts it into his power to have a multiplicity of books at his disposal, and to inform himself, by conversation, of all the particulars which have escaped writers, and which, from being preserved in the memories of men, have only acquired the greater authority from that kind of tradition. It enables the writer to compose a work more perfect, and less defective in its principal parts."

It is impossible to tell exactly when he took these voyages. We can only say for certain, that he did not go to Rome for the first time till the end of Vespasian's reign, and that he went there no more after that of Domitian. For it appears, that he was finally settled in his own country, a little before the latter's death, and that he retired thither at the age of forty-four or forty-five. His motive for fixing his retirement there is worth observing. "I was born, says he, in a very small city; and to prevent it from being smaller, I choose to remain in it." And indeed what glory has he not brought it! Cato of Utica, having with difficulty prevailed upon the philosopher Athenodorus to go with him from Asia to Rome, was so much pleased with, and so proud of that conquest, that he considered it as a greater, more glorious, and more useful exploit, than the exploits of Lucullus

¹ Plut. in *Moral* p. 816.

² In vit. *Demost* p. 816.

and Pompey, who had triumphed over the nations and empires of the East. If a stranger, famous for his wisdom, can do so much honour to a city of which he is not a native, how much must a great philosopher, a great author, exalt the city that produced him, and in which he chooses to end his days, though he could find greater advantages elsewhere. Mr. Dacier says with reason, that nothing ought to do Plutarch more honour than this love and tenderness which he expressed for Chæroneæ. We every day see people quit their country to make their fortunes, and aggrandize themselves; but none who renounce their ambition, to make, if we may be allowed to say so, the fortune of their country. Plutarch has rendered his very famous. Hardly any body remembers that Chæroneæ was the place where Philip gained the great victory over the Athenians and Bœotians, which made him master of Greece; but multitudes say, it was there Plutarch was born, it was there he ended his days, and wrote most of those fine works that will be of lasting use and instruction to mankind.

During his stay at Rome, his house was always full of the lovers of learning, among whom were the greatest personages of the city, who went thither to hear his discourses upon the different subjects of philosophy. In those times, the principal persons of the state, and the emperors themselves, thought it for their honour, and made it their pleasure, to be present at the lectures of the great philosophers and famous rhetoricians. We may judge of the passion with which these public dissertations of Plutarch were heard, and of the attention of his auditors, from what he tells us himself in his treatise upon curiosity.³ "Formerly, at Rome," says he, "when I was speaking in public, Arulenus Rusticus, whom Domitian afterwards put to death through envy of his glory, was one of my hearers. Whilst I was in the midst of my discourse, an officer came in, and delivered him a letter from Cæsar (probably Vespasian). The assembly kept a profound silence at first, and I stopped to give him time to read his letter: but he would not; and did not open it till I had done, and the assembly was dismissed." This was perhaps carrying deference for the orator a little too far. A fault not very common, with the excuse of a very laudable principle!

Plutarch's dissertations were always in Greek. For, though the Latin tongue was used throughout the empire, he did not understand it well enough to speak it. He tells us himself,⁴ in the life of Demosthenes, that during his residence at Rome, the public affairs, with which he was charged, and the number of persons that came

every day to entertain themselves with philosophy, did not afford him time for learning it; that he did not begin to read the writings of the Romans till very late; and that the terms of that language did not serve so much to make him understand the facts, as the knowledge he had before of the facts, to make him understand the terms. But the Greek tongue was well known at Rome, and, properly speaking, was even the language of the sciences; witness the works of the emperor Marcus Aurelius, who wrote his admirable reflections in Greek. This want of knowing the Latin tongue made Plutarch commit some faults, which are to be observed in his writings.

He had the most considerable offices in his country: for he was Archon, or principal magistrate. But he had passed through inferior employments before, and had acted in them with the same care, application, and satisfaction to the public, as he did afterwards in the most important. He was convinced, and taught others by his example,⁵ that the employments with which our country thinks fit to charge us, however low they may seem, reflect no dishonour upon us, and that it depends on a man of worth and sense to make them noble, by the manner in which he acquits himself of them; and this he proves by the example of Epaminondas.

As Plutarch punctually discharged all the duties of civil life, and was at the same time a good son, a good brother, father, husband, master, and citizen; he had the pleasure to find in his domestic affairs, and throughout his family, all the peace and satisfaction he could desire: a felicity not very common, and the effect of a wise, moderate, and obliging spirit. He speaks much in favour of his brothers, sisters, and wife.⁶ The latter was descended from the best families of Chæroneæ, and was esteemed a model of prudence, modesty, and virtue: her name was Timoxena. He had four sons successively by her, and one daughter. He lost two of the first, and after them the daughter at two years of age. We have his letter of consolation to his wife upon the death of this child. He had a nephew, called Sextus, a philosopher of such great learning and reputation, that he was sent for to Rome to teach the emperor Marcus Aurelius the Grecian literature. That emperor mentions him much for his honour in the first book of his reflections. "Sextus," says he, "taught me by his example to be mild and obliging, to govern my house as a good father of a family, to have a grave simplicity without affectation, to endeavour to find out and prevent the desires and wants of my friends, to bear the

ignorant and presuming, who speak without thinking of what they say, and to adapt myself to the understanding of all men," &c. These are all excellent qualities, especially that which induced him "to find out and prevent the desires and wants of his friends," because it shows that Marcus Aurelius knew the essential duty of a prince, which is to be fully convinced within himself, that, as a prince, he is born for others, and not others for him. As much may be said of all persons in place and authority.

It is time to proceed to the works of Plutarch. They are divided into two classes, the *Lives of Illustrious Men*, and his *Morals*.

In the latter there are a great number of curious facts not to be found elsewhere, with very useful lessons both for the conduct of private life, and the administration of public affairs, and even admirable principles concerning the divinity, providence, and the immortality of the soul; but with a mixture every where of the absurd and ridiculous opinions, which we find in almost all the pagans. The ignorance also of true physics renders the reading of many of these tracts tedious and disagreeable.

The most esteemed part of Plutarch's works is his *Lives of Illustrious Men*, Greeks and Romans, whom he matches as near as possible, and compares together. We have not all he composed; at least sixteen of them are lost. Those, of which the loss is most to be regretted, are the *Lives of Epaminondas* and the two *Scipios Africani*. The comparisons of Themistocles and Camillus, of Pyrrhus and Marius, of Phocion and Cato, and of Cesar and Alexander, are also wanting. It would not be surprising, if a man of fine taste and judgment were asked, which of all the books of profane antiquity he would preserve, he having the choice of saving only one of them—it would not be surprising if such a man pitched upon Plutarch's *Lives*. It is not only the most accomplished work we have, but the most proper for forming men either for public affairs and functions abroad, or for private and domestic life. Plutarch does not suffer himself, like the generality of historians, to be dazzled by the splendour of actions, which make a great deal of noise, and attract the admiration of the vulgar, and the many. He usually judges of things by what constitutes their real value. The wise reflections, which he scatters every where in his writings, accustom his readers to think in the same manner, and teach them wherein true greatness and solid glory consist. He inflexibly denies those exalted attributes to every thing that does not bear the stamp of justice, truth, goodness, humanity, love of the public, and has only the appearances of them. He does not stop at the exterior and glittering actions, in which princes, conquerors, and the other great ones of the earth, intent

upon acquiring themselves names, play each their part upon the stage of the world, where they exhibit, to use the expression, a transitory and assumed character, and succeed in the counterfeit for a time. He unmasks and divests them of all the foreign glare and disguise that surround them; he shows them as they are in themselves; and to put it out of their power to escape his piercing sight, he follows them with his reader into the most secret recesses of their houses, examines them, if I may say so, in their dishabille, listens to their most familiar conversations, considers them at table where constraint seldom comes, and even at play, where disguise is still more unusual. These are the qualities in which Plutarch is wonderful, and which, in my opinion, are too much neglected by modern historians, who shun particulars of a common nature as low and trivial, which, however, show the characters of men better than more great and glaring circumstances. These details are so far from diminishing the merit of Plutarch's *Lives*, that they are directly what renders them at the same time more agreeable, and more useful.

The reader will permit me to give an instance of this kind of action in this place. I have already cited it in my treatise upon the study of polite learning, in that part of it where I examine in what true greatness consists.

The marshal Turenne never set out for the army, without having first ordered all his tradesmen to be directed to deliver in their bills to his steward. His reason for it was, that he did not know whether he should return from the field. This circumstance may appear trifling and low to some people, and not worthy of a place in the history of so great a man as that marshal. Plutarch would not have thought so; and I am convinced, that the author of the new life of that prince, who is a man of sense and judgment, would not have omitted it, if it had come to his knowledge. For indeed it argues a goodness, equity, humanity, and even religion, which are not always to be found in great lords, who are too apt to be insensible to the complaints of the artisan and the poor, the payment of whom, however, deferred only a few days, according to the Holy Scripture, cries for vengeance to heaven, and does not fail to obtain it.

As to the style of Plutarch, his diction is neither pure nor elegant: but to make us amends, it has a wonderful force and energy in painting the most lively images in few words, in venting the sharpest and most piercing things, and in expressing noble and sublime thoughts. He frequently enough makes use of comparisons, which throw grace and light into his narrations and reflections; and has harangues of inimitable beauty, almost always in the strong and vehement style.

The beauties of this author must be very solid, and bear much of the stamp of good taste in them, to make themselves so perceptible as they still are in the old French of Amiot. . . But I mistake. That old French has an air of freshness, a spirit in it, that seems to make it bloom and grow young again every day. Hence it is that very good judges choose rather to use the translation of Amiot, than to translate the passages they quote from Plutarch themselves, "not believing," says Mr. Racine, in the preface to his *Mithridates*, "themselves capable of equalling the beauties of it." I never read it, without regretting the loss of many happy terms and expressions in that old language, which have almost as much energy as those of Plutarch. . . We suffer our language to impoverish itself every day, instead of being studious, after the example of our neighbours the English, of discoveries to enrich it. It is said that our ladies, out of too much delicacy, are partly the cause of that dearth, to which our language is in danger of being reduced. This would be very wrong, and they ought rather to favour with their suffrages, which would bring over abundance of followers, the prudent boldness of writers of a certain rank and merit; who, on their side, should assume more boldness, and venture more new words than they do, but always with judicious reserve and discretion. We are, however, obliged to Mr. Dacier for having substituted a new translation of Plutarch's *Lives* to that of Amiot, and for having thereby enabled a greater number to read them. It might have been more elegant and more laboured. But to carry a work of so vast an extent to its ultimate perfection, would require the whole life of an author. . .

ARRIAN.

Arrian was of Nicomedia. His learning and eloquence, which acquired him the title of the new Xenophon, raised him to the highest dignities, and even the consulship, at Rome. There is reason to believe him the same Arrian who governed Cappadocia in the latter part of Adrian's reign, and repulsed the Alans. He lived at Rome in the time of Adrian, Antoninus, and Marcus Aurelius. He was the disciple of Epictetus, the most celebrated philosopher of that time. He wrote a work upon the *Conversations of Epictetus*, in eight books, of which we have only the four first, and composed many other treatises.

His seven books upon the expeditions of Alexander are come down to us; a history the more valuable, as we have it from a writer, who was both a warrior and a good politician. Photius accordingly gives him the praise of having wrote the life of that conqueror better than any body. We have from that critic an abridgment

of the lives of Alexander's successors, which Arrian also wrote in ten books. He adds, that the same author composed a book upon India; and it is still extant, but has been made the eighth book of the History of Alexander. He also wrote a description of the coasts of the Euxine Sea. Another is ascribed to him upon those of the Red Sea, that is to say the eastern coasts of Africa, and those of Asia as far as India. But this seems to be a more ancient author's, cotemporary with Pliny the naturalist.

ÆLIAN. (*Claudius Ælianus*.)

Ælian was of Præneste, but passed the greater part of his life at Rome; for which reason he calls himself a Roman. He wrote a little work, in fourteen books, entitled, *Historia Varia*, or *Miscellaneous Histories*; and another, in seventeen books, upon the History of Animals. We have a treatise in Greek and Latin upon the order observed by the Greeks in drawing up armies, inscribed to Adrian, and composed by one of the name of Ælian. All these works may be the same author's, who is believed to be the person whose eloquence Martial praises in one of his epigrams. ¹

APPIAN.

Appian was of Alexandria, and lived in the time of Trajan, Adrian, and Antoninus. He pled some time at Rome, and was afterwards comptroller of the imperial domains. He wrote the Roman History, not in the order of time like Livy, but making each nation subjected by the Romans a work apart, and relating events as they happened to each separately. Accordingly his design was to write an exact history of the Romans, and of all the provinces of their empire, down to Augustus; and sometimes he went also so low as to Trajan. Photius speaks of twenty-four books of it, though, when he wrote, he had not seen all those which Appian mentions in his preface.

We have at present the history of the wars of Africa, Syria, Parthia, Mithridates, Iberia or Spain, and Hannibal; some fragments of those of Illyria; five books of the civil wars, instead of eight mentioned by Photius, and some fragments of several others, extracted by Mr. Valois out of the collections of Constantine Porphyrogenitus, with extracts of the like nature from Polybius, and several other historians. Photius observes, that this author has an extreme passion for the truth of history; that none teach the art of war better; and that his style is simple and void of superfluity, but lively and vigorous. In

¹ Lib. xii. Epig. 24.

his harangues he gives his reader excellent models of conduct, either for reanimating troops when discouraged, or for appeasing them when mutinous and violent. He borrows many things from Polybius, and often copies Plutarch.

DIOGENES LAERTIUS.

Diogenes Laertius lived in the time of Antoninus, or soon after. Others place him in the reign of Severus and his successors. He wrote the *Lives of the Philosophers*, in ten books, and carefully relates their opinions and apophthegms. This work is of great use for knowing the different sects of the ancient philosophers. The surname of *Laertius* usually given him, probably implies his country, which was perhaps the fortress or city of Laertia in Cilicia. We find by his writings, that after having studied history and the maxims of the philosophers, he embraced the sect of the Epicureans, the farthest from truth, and the most contrary to virtue, of them all.

DION CASSIUS. (*Cocceius* or *Coccianus*.)

Dion was of Nicæa in Bithynia. He lived in the reigns of the emperors Commodus, Pertinax, Severus, Caracalla, Macrinus, Heliogabalus, and Alexander, who all had a very high regard for him, and confided the most important offices and governments of the empire to his care, A. D. 229. Alexander nominated him consul for the second time. After this consulship, he obtained permission to retire, and pass the rest of his life in his own country, upon account of his infirmities.

He wrote the whole Roman History,¹ from the arrival of Æneas in Italy to the reign of the emperor Alexander, in eight decades, or fourscore books. He tells us himself,² that he employed ten years in collecting materials of all that passed from the foundation of Rome to the death of Severus, and twelve years more in composing his history down to that of Commodus. He afterwards added to it that of the other emperors,³ with as much exactness as he could, to the death of Heliogabalus, and a simple abridgment of the eight first years of Alexander, because from having been little in Italy during that time, it had not been in his power to know so well how things had passed.

Photius observes that his style is lofty, and adapted to the greatness of his subject: that his terms are magnificent, and that his phrases and manner of writing have the air of antiquity: that he has taken Thucydides for his model, whom he imitates excellently in the turn of his

narration and harangues, and has followed him in all things, except in being perspicuous. This praise is much in Dion's favour, but I do not know whether it does not a little exceed the bounds of truth. Vossius says, and Lepsius had thought the same before him, that this historian is unpardonable for not having known how to esteem virtue according to its value, and for having censured the greatest men of antiquity, as Cicero, Brutus, Cassius, and Seneca, either out of malignity of mind, or corruption of manners and judgment. That he did so is certain; and whatever his motives were, the thing in itself can never be for his honour.

He composed, as we have said, fourscore books of the Roman history; but only a very small part of that great work has come down to us. For the first thirty-four books are lost, with the greater part of the thirty-fifth, except some fragments. The twenty that follow, from the end of the thirty-fifth to the fifty-fourth, are the part that remain entire. Vossius believes that the six following, which come down to the death of Claudius, are also perfect. But Bucherius maintains, that they are much otherwise; which seems very probable. We have only some fragments of the last twenty. This defect is somewhat supplied by an abridgment of Dion from the thirty-fifth book, the time of Pompey, to the end, composed by Johannes Xiphilinus, patriarch of Constantinople in the eleventh century. This epitome is found to be sufficiently just, Xiphilinus having added nothing to Dion, except in some very few places, where it was necessary, and having generally made use of his own words. The history of Zonarus may also be called an abridgment of Dion, for he follows him faithfully, and sometimes informs us of things omitted by Xiphilinus.

HERODIAN.

Nothing is known of the life of Herodian, except that he was of Alexandria, the son of a rhetorician named Apollonius *Dyscolos*, or the *Rigid*, and that he followed his father's profession. He is much known by his *History of the Emperors*, in eight books, from the death of M. Aurelius to those of Maximus and Balbinus. He assures us himself, that his history of those sixty years, is that of his own times, and what he had seen himself. He had borne different offices both in the court and civil government of Rome, which had given him a share in several of the events which he relates. As to his history, Photius judges much in his favour. For he tells us that it is perspicuous, lofty, and agreeable; that his diction is just and sober, observing the medium between the affected elegance of such as disdain simple and natural beauties, and the low and languid

¹ Suid. Phot.

² Dio. l. lxxii. p. 829.

³ Id. l. lxxx. p. 917.

expression of those, who either do not know, or despise, the delicacy and refinements of art; that he does not aim at a false agreeable by multiplying words or things, and omits nothing necessary; in a word, that he gives place to few authors for all the beauties of history. Politian's translation of Herodian's work happily sustains, and almost equals, the elegance of the original. The French version of it, which the Abbé Mongaut has given the public, improves much upon the Latin.

EUNAPIUS.

Eunapius was of Sardis in Lydia, and came to Athens at the age of sixteen, A. D. 363. He studied eloquence under Proserus the Christian sophist, and magic under Chrysantus, who had married his cousin. Eunapius's *Lives of the Sophists of the Fourth Century* is extant. There are many circumstances in it relating to the history of that time. He begins with Plotinus, who appeared in the middle of the third century, and goes on to Porphyrius, Jamblichus, and his disciples, upon whom he expatiates particularly. He also wrote an *History of the Emperors*, in fourteen books, which began in the year 268, in the reign of Claudius the successor of Gallienus, and ended at the death of Eudoxia the wife of Arcadius. Some fragments of this history have been preserved in the extracts of Constantine Porphyrogenitus upon embassies, and in Suidas. We find in them, that he was exceedingly exasperated against the Christian emperors, and especially against Constantine. The same spleen is observed to prevail in his *lives of the sophists*, especially against the monks. It is no wonder that a magician was an enemy to the Christian religion.

ZOSIMUS.

Zosimus, count and advocate fiscal, lived in the time of Theodosius the younger, A. D. 415. He wrote the *History of the Roman Emperors*, in six books. The first, which contains the succession of those princes from Augustus down to Probus (for what relates to Dioclesian is lost), is extremely abridged. The other five are more diffuse, especially to the time of Theodosius the Great and his children. He goes no farther than the second siege of Rome by Alaric. The end of the sixth book is wanting. Photius praises his style. He says that Zosimus has almost only copied and abridged Eunapius' history, which perhaps occasioned its being lost. He is no less exasperated than the other against the Christian emperors.

PHOTIUS.

Photius, patriarch of Constantinople, lived in the ninth century. He was a person of immense

erudition, and of still vaster ambition, which hurried him into horrible excesses, and occasioned infinite troubles in the church. But that is foreign to our present subject.

I have placed him among the Greek historians, and shall conclude my account of them with him, not because he composed an history in form, but because, in one of his works, he has given us extracts from a great number of historians, of whom many, without him, would be almost entirely unknown. This work is entitled *Μερίβιβλος*, *Bibliotheca*, or *Library*, and indeed it merits that name. Photius examines almost three hundred authors in it, and tells us their names, countries, times when they lived, works they composed, judgment to be passed on them in respect to style and character; and sometimes even gives us extracts of considerable length, or abridgments from them, which are to be found only in this work. Hence we may judge of how great value his work is to us.

ARTICLE II.

Of the Latin Historians.

I shall not say much upon the feeble beginnings, and, to use the expression, the infancy, of the Roman history. Every body knows that it consisted at first only of simple notes or memorandums drawn up by the *Pontifex Maximus*,⁴ who regularly set down every year whatever passed of most consequence in the state, either in war or peace; and this custom, established very early at Rome, subsisted to the time of P. Mucius the Pontifex Maximus, or to the year of Rome 629, or 631. The name of the *Great Annals* were given to these memoirs.

We may suppose, that in those early times these records were written in a very simple and even gross style. The pontiffs contented themselves with setting down the principal events, the times and places wherein they happened, the names and condition of the persons who had the greatest share in them, in a plain manner without regard to ornament.⁵ However rude and imperfect these annals were, they were of great importance, because there were no other monuments to preserve the memory of all that passed at Rome, and it was a great loss when

4 *Erat historia nihil aliud nisi Annalium confectio: cujus rei, memoriaeque publicæ retinendæ causa, ab initio rerum Romanarum usque ad P. Mucium Pontificem maximum res omnes singulorum annorum mandabat literis Pontifex maximus—qui etiam nunc *Annales maximi* nominantur. Cic. l. ii. de Orat. n. 52.*

5 *Sine ullis ornamentis monumenta solum temporum, hominum, locorum, gestarumque rerum reliquerunt—Non exornatores rerum, sed tantummodo narratores fuerunt. Ibid. n. 54.*

most of them were destroyed at the burning of the city by the Gauls.¹

Some years after, history began to quit this gross antique garb, and to appear in public with more decency. The poets were the first who conceived the design of improving and adorning it. NÆVIUS composed a poem upon the first Punic war, and ENNIUS wrote the annals of Rome in heroic verse.

History at length assumed a regular form, and appeared in prose. Q. FABIVS PICTOR is the most ancient of the Latin historians: he lived in the time of the second Punic war. L. CINCIVS Alimentus was his cotemporary. Livy cites them both with praise.² It is believed that they wrote their histories first in Greek, and then in Latin. Cincius certainly wrote the history of Gorgias the celebrated rhetorician in the latter language.

CATO the censor (*M. Portius Cato*) has a juster title than them to the name of Latin historian: for it is certain that he wrote his history in that tongue. It consisted of seven books, and was entitled *Origines*, because in the second and third books he related the origin of all the cities of Italy.³ We find that Cicero set a great value on this history. *Jam vero Origines ejus (Catonis) quem florem, aut quod lumen eloquentia non habent?*⁴ But upon Brutus' judging this praise excessive, he put a restriction to it by adding, That nothing was wanting to the writings of Cato, and the strokes of his pencil, but a certain lively glow of colours, not discovered in his time: *Intelliges nihil illius lineamentis nisi eorum pigmentorum, quæ inventa nondum erant, florem et colorem defuisse.*⁵

L. PISO FRUGI, surnamed Calpurnius, is also cited among these ancient historians. He was tribune of the people in the consulship of Censorinus and Manlius, in the 605th year of Rome. He was also several times consul. He was a civilian, orator, and historian; and had composed harangues, which were no longer in being in Cicero's time, with annals, of a style mean enough, in that orator's opinion. Pliny speaks more advantageously of them.

The true character of all these writers was great simplicity.⁶ They did not yet know what delicacy, beauty, and ornament of speech were.

They were satisfied with making their readers understand them, and confined themselves to a close and succinct style.

I proceed now to the historians better known, and whose writings have come down to us.

SALLUST.

It is not without reason that Sallust has been called the first of the Roman historians:

Crispus Romana primus in historia. Martialis.

and that he has been believed equal to Thucydides, so generally esteemed among the Greek historians: *Nec opponere Thucydidi Sallustium verear.*⁷ But without determining their ranks here, which would not become me to do, it suffices to consider Sallust as one of the most excellent historians of antiquity. The reader may find very solid reflections upon his character in the preface to the French translation of this historian.

The prevailing quality of his writings, and that which characterizes Sallust in a more peculiar and singular manner, is the brevity of his style, which Quintilian calls *Immortalem Sallustii velocitatem*. Scaliger is the only one who denies him this praise; but, as I have already observed, he is almost always odd and singular in his judgments. This brevity of Sallust proceeds from the lively vigour of his genius. He thinks strongly and nobly, and writes as he thinks. His style may be compared to those rivers, which whilst they flow within narrower banks than others, are deeper, and carry greater burthen. The language in which he wrote was extremely adapted to a close diction, and thereby favoured him in following the bent of his genius. It has, as well as the Greek, the advantage of being equally susceptible of the two opposite extremes. In Cicero it gives us a numerous, flowing, periodic style: in Sallust, a short, broken, precipitate one. The latter often suppresses words, and leaves the care of supplying them to his reader. He throws many terms and phrases together, without any conjunctions, which gives a kind of impetuosity to his discourse. He makes no scruple to use old words in his history, if they be shorter, or have more energy than the terms in fashion; a liberty for which he was reproached⁸ in his lifetime, as the following ancient couplet shows:

*Et verba antiqui multùm furate Catonis
Crispe, Jugurthinæ conditor historiar.*

⁷ Quintil.

⁸ Sallustii novandi studium multa cum invidia sua
Aul. Gell. l. iv. c. 15.

¹ Si quæ in commentariis Pontificum, aliisque publicis privatisque erant monumenta, incensa urbe pleraque interierunt. *Liv. l. vi. n. 1.*

² *Liv. l. xxi.*

³ Cornel. Nepos. in fragm.

⁴ In Brut. n. 66.

⁵ *Ibid. n. 238.*

⁶ Quails apud Græcos Pherecydes, Hellanius, Acusilaus fuit; tales noster Cato, et Pictor, et Piso: qui neque tenent quibus rebus ornatur oratio; (modò enim hæc ista sunt importata) et, dum intelligatur quid dicant, unam dicendi laudem putant esse brevitatem. *Ibid. li. de Orat. n. 53.*

But he especially makes great use of metaphors, and does not choose the most modest, and least glowing, as the masters of the art declare necessary, but the most concise, the strongest, the most lively, and the most bold. By all these methods, and others, which I omit, Sallust has succeeded in framing himself an entirely particular style, and one that suits him only. He quits the common road, but without going out of his way, and by paths that only shorten it. He seems not to think like other men, and yet good sense is the source of all his thoughts. His ideas are natural and reasonable: but all natural and reasonable as they are, they have the advantage of being new, from being peculiarly curious and exquisite.

We know not which to admire most in this excellent author, his descriptions, characters, or harangues: for he succeeds alike in them all; and we cannot discern upon what foundation Seneca the elder, or rather Cassius Severus, whose opinion he repeats, could say, that the harangues of Sallust are suffered only upon account of his history: *in honorem Historiarum leguntur*. Nothing can be added to their force, spirit, and eloquence. It is highly probable that the passage in question is not applied to the harangues inserted by Sallust in his history, but to those he spoke in the senate, or to some pleadings of his. When we read in the history of the Jugurthine war, the account of a fort surprised by a Ligurian soldier of Marius's army, so lively and animated is the description, that it is as if we saw him climb along the steep rocks, and even as if we climbed along with him.

We find five or six characters in Sallust, which are so many masterpieces; and I do not know whether there be any thing in the whole extent of literature of a beauty that approaches nearer the idea of perfection. I shall repeat two of them in this place, from which the reader may judge of the rest.

Character of Catiline.

"L. Catilina, nobili genere natus, fuit magna vi et animi et corporis, sed ingenio malo pravoque. Hunc ab adolescentia bella intestina, cædes, rapinæ, discordia civilis grata fuere, ibique juventutem suam exercuit. Corpus patiens inædiæ, algoris, vigiliæ, supra quam culquam credibile est. Animus audax, subdolus, varius, cujuslibet rei simulator ac dissimulator: alieni appetens, sul profusus; ardens in cupiditatibus. Satis eloquentiæ, sapientiæ parum. Vastus animus immoderata, incredibilia, nimis alta semper cupiebat."

"L. Catiline was of noble birth, and of great strength both of body and mind, but of a disposition highly corrupt and depraved. From his

earliest years, intestine wars, murders, rapine, and civil discord were his delight, and the usual exercises of his youth. He bore hunger, cold, watching and fatigues, with a patience not credible of any body. He was bold, deceitful, inconstant, and capable of assuming and disguising any thing: greedy of another's, profuse of his own, and violent in all his appetites. He had eloquence enough, but little wisdom. His vast spirit, his boundless ambition, perpetually coveted things of an excessive, incredible, and lofty nature."

Character of Sempronia.

"In his erat Sempronia, quæ multa sæpe virilis audaciæ facinora commiserat. Hæc mulier genere atque forma, præterea viro atque liberis satis fortunata fuit: Literis Græcis et Latinis docta: psallere, saltare elegantius, quam necesse est probæ: multa alia, quæ instrumenta luxuriæ sunt, sed ei cariora semper omnia, quam decus atque pudicitia fuit. Pecuniæ an famæ minus parceret, haud faciliè discerneres — Ingenium ejus haud absurdum: posse versus facere, jocum movere, sermone uti vel modesto, vel molli, vel procaci. Prorsus multæ facitiæ, multusque lepos inerat."

"Of this number was Sempronia, who had in many things frequently instanced a masculine boldness of genius for vice. This woman was sufficiently happy in her person and birth, as well as in her husband and children: she was well read in the Greek and Roman learning: could sing and dance with more elegance than was necessary for a matron of virtue; and had besides many of those qualities, that minister to luxury and render vice amiable, on which she ever set an higher value than upon the decency and chastity of her sex. It was not easy to say whether she was less frugal of her money or of her reputation. Her wit was by no means disagreeable: she could make verses, jest agreeably, and converse either with modesty and tenderness, or tartness and freedom: but in whatever she said there was always abundance of spirit and humour."

There are many admirable passages in Sallust, especially when he compares the ancient manners of the commonwealth with those of his own times. When we hear him speak strongly, as is usual enough with him, against luxury, debauchery, and the other vices of his age, one would take him for a man of the strictest habits and greatest probity in the world. But we must not conclude so from so plausible an appearance. His conduct was so immoral, that it occasioned his being expelled the senate by the censors.

Besides the wars of Catiline and Jugurtha, Sallust wrote a general history of the events that happened during a certain number of years,

of which amongst other fragments there are several perfectly fine discourses.

CORNELIUS NEPOS.

For some time the works of Cornelius Nepos were ascribed by mistake to Emilius Probus. Vossius thought that that was the name of the bookseller who offered to Theodosius the Lives of Great Generals, written partly by his own hand and partly by that of his father and of his mother. Cornelius Nepos lived during the time of Cæsar and of Augustus, and died under the latter. He was born in Cisalpine Gaul, at Hostilia, a little village dependant upon Veronna.

Of the different works which he composed, there now remain the Lives of Great Generals abridged, an abridgment of that of Cato, and the Life of Pomponius Atticus, which is sufficiently extended. There are twenty-two Lives of Great Generals, all Grecians, except the two last, Hamilcar and Hannibal, who were Carthaginians. Between Timoleon and Hamilcar, Nepos gives a kind of catalogue of kings, both of Persia and of Greece, in the twenty-first chapter, which is very short. He had written abridged Lives of Roman Generals on the same plan as those of the Greeks, in order that, as he himself says, a comparison may be made and judgment more easily passed on their respective merits.¹ It would appear, also, that he had composed Lives of other Greeks and Romans. He speaks² of that of Philistus in his life of Dion. Aulus Gellius quotes from the first book of the life of Cicero. In the abridged life of Cato,³ which has come down to us, Nepos cites a more extended one, which he had written at the request of Atticus, and to which he refers his readers.⁴ In fine, we have the life of Pomponius Atticus, which is a precious morsel, and which of itself could give us an accurate idea of this historian's merit.

His style is pure, neat, elegant. Simplicity, which is one of his chief characteristics, is mingled with a remarkable delicacy, and relieved at times by reflections noble and solid. But that which appears to me the most valuable thing in this author is a marked regard for the great principles of honour, probity, virtue, disinterestedness, and love of the public good, which he has contrived to introduce into all his writings. His intimate connexion with Atticus, and through it, of course, with Hortensius, Cicero, and his other illustrious contemporaries, are sufficient proofs of their esteem of the goodness of his heart and the excellence of his genius.

LIVY.

The Latin preface to the new edition of Livy, of which Mr. Crevier professor of rhetoric in the college of Beauvais has lately published two volumes, would supply me with the little I intend to say here of this excellent historian. If I was less Mr. Crevier's friend, who insists absolutely upon my declaring him my pupil, which I think highly for my honour, I should expatiate upon the usefulness and merit of his work. The preface of it alone is sufficient to inform the reader what value he ought to set upon it.

The more earnestly we desire to know an author famous for his writings, the more we regret, that little or nothing more than his name is come down to us. Livy is one of those authors who have rendered their names immortal, but whose lives and actions are little known. He was born at Padua, in the consulship of Piso and Gabinus, fifty-eight years before the Christian era. He had a son, to whom he wrote a letter upon education and the studies proper for youth, which Quintilian mentions in more than one place, and of which we ought very much to regret the loss. It is in this letter, or rather short treatise, that he says in respect to the authors proper to be recommended to the reading of youth, that they ought first to study Demosthenes and Cicero, and next such as resemble these excellent orators most: *Legendos Demosthenem atque Ciceronem, tum ita ut quisque esset Demostheni et Ciceroni simillimus.*⁵ He speaks in the same letter, of a rhetorician⁶ who disapproved of the compositions of his pupils, when they were perspicuous and intelligible, and made them correct them, as he called it, by throwing obscurity into them. When they had retouched them in this manner, he would say, "Ay, this now is much better, I understand nothing of it myself." Could one believe so ridiculous an extravagance possible? Livy also composed some philosophical works, and dialogues, in which philosophy had a part. But his great work was the Roman history in an hundred and forty, or an hundred and forty-two books, from the foundation of Rome to the death and funeral of Drusus, which happened in the 743d year of Rome, and consequently included that number of years. We find, from some dates in his history, that he employed the whole time between the battle of Actium and the death of Drusus

5 Quintil. l. x. c. 1.

6 Apud Titum Livium invenio fuisse præceptorem illum, qui discipulos obscurare quæ dicerent juberet, Græco verbo utens, *εὐρίστην*. Unde illa scilicet egregia laudatio: Tanto melior; ne ego quidem intellexi. *Quintil. l. viii. c. 2.*

7 Senec. Epist. 100.

1 In vit. Hannib. c. 13. 2 Cap. 3. 3 xv. 28.

4 Cap. 3.

in composing it, that is to say, about twenty-one years. But he published it from time to time in parts;⁹ and this was what acquired him so great a reputation at Rome, and the honourable visit of a stranger from the remotest part of Spain, who took so long a journey only for the sake of seeing him. The capital of the world had enough to engage and satisfy the eyes of a curious person in the magnificence of its buildings, and the multitude of its paintings, statues, and ancient monuments. But this stranger found nothing so rare and precious in Rome as Livy. After having enjoyed his conversation at pleasure, and entertained himself agreeably with reading his history, he returned with joy and content to his own country. And this is knowing the value of men.

Nothing more is known of what regards Livy personally. He passed a great part of his life at Rome, esteemed and honoured by the great as he deserved. He died in his country at the age of seventy-six, in the fourth year of the reign of Tiberius. The people of Padua have honoured his memory in all times, and pretend to have actually preserved among them some remains of his body, and to have made a present in the year 1451, of one of his arms to Alphonso V. king of Arragon, at least the inscription says so. It were much more to be wished, that they had preserved his history. Only thirty-five books of it are come down to us, which is not the fourth part of the work, and even some of them imperfect. What a loss is this! The learned have flattered themselves from time to time with some faint hopes of recovering the rest, which seem solely founded in their great desire of them. *Johannes Freinshemius* has endeavoured to console the public for this loss by his *Supplements*; and has succeeded in it as far as was possible. *Freinshemius*, born at Ulm in Suabia in 1608, studied at Strasburgh with great success. In 1642, he was invited into Sweden, where he filled several considerable employments of literature. Upon his return into his country, he was made honorary professor in the university established by the elector Palatine at Heidelburgh, where he died in 1660. The commonwealth of letters is under infinite obligations to him for having rendered Livy the same service as he had before done Quintus Curtius, by filling up all we have lost of that great writer of the Roman history, with an hundred and five books of supplements. Mr. Doujat also filled up the deficient places in the last books which remain of Livy, but with very different success. Mr. Crevier has revised and retouched *Freinshemius's* supplements in several places, and worked those of Doujat entirely anew. By these means we have a con-

tinued and complete body of the history of the Roman commonwealth.

It is doubted whether Livy himself divided his history from ten to ten books, that is to say into decades. However that may be, the division seems commodious enough. Respecting the epitomes in the front of each book, the learned do not believe them either done by Livy or Florus. Whoever the author was, they have their use, as they serve to show, of what the books we have lost, treated.

Let us now examine the work in itself. There reigns throughout all its parts, an eloquence perfect, and perfect in every kind. In the narrations, descriptions, speeches, the style, though varied to infinity, sustains itself equally every where: simple without meanness, elegant and florid without affectation, great and sublime without tumour, flowing or concise, and full of sweetness or force, according to the exigency of the matter; but always clear and intelligible, which is not the meanest praise of history. Pollio, who was of a refined taste difficult to please, pretended he discovered *Patavinity* in the style of Livy: that is to say, some words or turns of phrase which savoured of the country of Padua.¹⁰ A man born there might retain, if we may be allowed the expression, some smatch of the soil, and might not have all the refinement and delicacy of the Roman *urbanity*, which was not so easily communicated to strangers, as the freedom of the city. But this is what we can now neither perceive nor understand. This reproach of *Patavinity* has not hindered *Quinctilian*¹¹ from comparing Livy to Herodotus, which is giving him great praise. He makes us observe the sweet and flowing style of his narrations, and the supreme eloquence of his harangues, wherein the characters of the persons he introduces speaking, are sustained with all possible exactness, and the passions, especially the soft and tender, are treated with wonderful art. All however that Livy could do, was to attain, by qualities entirely different, to the immortal reputation which Sallust acquired by his inimitable brevity: for these two historians have with reason been said

⁹ In Tito Livio miræ facundia viro putat inesse Pollio Asinius quondam Patavininitatem. Quare, si fieri potest, et verba omnia, et vox, hujus alumnus urbis oleant: ut oratio Romana plane videatur, non civitate donata. *Quinctii*. l. viii. c. 1.

¹⁰ Nec indignetur sibi Herodotus æquari Titum Livium, cum in narrando miræ jucunditatis clarissimique candoris, tum in concionibus supra quam dici potest eloquentem: ita dicuntur omnia cum rebus tum personis accommodata. Sed affectus quidem, præcipuè eos qui sunt dulciores, ut parcissime dicam, nemo historicorum commendavit magis. Ideoque immortalē illam Sallustii velocitatem diversis virtutibus consecutus est. *Quinct.* l. x. c. 1.

rather to be equal, than like each other, *pares magis, quam similes*.

It is not only by his eloquence, and the beauty and spirit of his narration, that Livy acquired the reputation he has enjoyed for so many ages. He recommended himself no less by his fidelity, a virtue so necessary and desirable in a historian. Neither the fear of displeasing the powerful of his times, nor the desire of making his court to them, prevented him from telling the truth. He spoke in his history¹ with praise of the greatest enemies of the house of the Cæsars, as of Pompey, Brutus, Cassius and others; and Augustus took no offence at it: so that we know not which most to admire, the moderation of the prince, or the generous freedom of the historian. In the thirty-five books that remain of Livy, he mentions Augustus only twice,² and that too with a reserve and sobriety of praise, which reproaches those flattering, self-interested writers, who, without discretion or measure, are so lavish of an incense to office and dignity, due only to merit and virtue.

If any defect may be imputed to Livy, it is his over fondness for his country: a rock he has not always taken care enough to avoid. While he perpetually admires the greatness of the Romans, he not only exaggerates their exploits, successes, and virtues; but disguises and diminishes their vices, and the faults they commit.

Seneca the elder³ reproaches Livy with having expressed a mean jealousy of Sallust, in accusing him of stealing a sentence from Thucydides, and of having maimed it by translating it ill. What probability is there that Livy, who copied whole books from Polybius, should make it a crime in Sallust to copy a single sentence, or rather a line? Besides, it is perfectly well rendered. *Δυναὶ γὰρ αἱ ἱστορίαι συγχρόνως καὶ ἀντιθέτως τὰ ἰσχυρὰ ἀμαρτυρεῖσθαι. Res secundæ mirè sunt vitiiis obtentui.* And how shall we reconcile this accusation with what the same Seneca says in another place, that Livy judged with the utmost equity and candour of the works of the learned? *Ut est natura candidissimus omnium magnorum ingeniorum æstimator T. Livius.*⁴ I believe we may rely upon this last testimony.

There is another complaint against him of a much more serious and important kind. He is taxed with ingratitude, and want of fidelity, either in not having named Polybius, or for having done it with too much indifference, in places where he copied him word for word. I

should be sorry if this reproach could be made with good foundation: for it affects the qualities of the heart, of which the honest man ought to be very jealous. But is it not probable, that he did speak of Polybius with praise in the other parts of his history not come down to us, that he did him all the justice due to his merit, and declared beforehand, that he made it his glory, and thought it his duty, to copy him word for word in many places, and that he should often do so without citing him, to avoid repeating the same thing too often? My own interest is a little concerned here: for in this point I have some occasion for the reader's indulgence.

These kind of blots observed in Livy have not however impaired his glory. Posterity on account of them has not admired his work the less, not only as a masterpiece of eloquence, but as a history, which every where inculcates the love of justice and virtue; wherein we find, mingled with his narration, the soundest maxims for the conduct of life, with a singular attachment and respect, that shines out every where, for the religion established at Rome when he wrote; (unfortunately for him it was false, but he knew no other;) in fine, a generous boldness and pious zeal in condemning with force the impious sentiments of the unbelievers of his age. *Nondum hæc, says he in a passage of Lib. 3. n. 90. quæ nunc tenet seculum, negligentia deum venerat: nec interpretando sibi quisque jurandum et leges aptas faciebat, sed suos potius mores ad ea accommodabat.* "The contempt of the gods, so common in our age, was not yet known. Oaths and the laws were the rules to which people conformed their conduct, and the art of adapting them to their own conveniency by illusive interpretations was then unknown."

From what I have now said, it seems reasonable to justify Livy in respect to the pretended superstition, with which he affects to relate such a number of miracles and prodigies equally ridiculous and incredible. The faith of history required, that he should not suppress things said to have happened before him, which he found in his own collections and the annals, and which made a part of the religion commonly received in those times, though perhaps he did not believe them himself. And he explains himself on this head often and clearly enough, attributing most of the pretended prodigies, which made so much noise, to an ignorant and credulous superstition.⁵

⁵ Romæ, aut circa urbem, multa ea hieme prodigia facta, aut (quod evenire solet motis semel in religionem animis) multa nuntiata et temere credita sunt. Lib. xxi. n. 62.

Cumis (adeo minimis etiam rebus prava religio inserit deos) mures in æde Jovis aurum rosas nuntiaturum est. Lib. xxviii. n. 23.

¹ Tacit. Annal. l. iv. c. 24.

² Lib. l. n. 19. and l. iv. n. 20. ³ Lib. 4. Controv. 4.

⁴ Id. suaser. 7. 6.

CÆSAR.

C. Julius Cæsar distinguished himself no less by his wit than his valour. He applied himself first to the bar, where he made a great figure. Only the desire of attaining the first rank in the commonwealth in respect to power, prevented him from disputing also the first rank at the bar in respect to eloquence.⁶ His peculiar character was force and vehemence. The same fire which he made appear in battle, is discernible in his writings. To this vigour of style he added great purity and elegance of language, which he had made his peculiar study, and upon which he piqued himself more than any other Roman.

He composed many works, among others two books upon the analogy of the Latin tongue.⁷ Who could believe, that so great a warrior as Cæsar should employ himself seriously in composing tracts upon grammar? How different are our manners and inclinations from those of that age! It is in one of these books upon analogy, that he recommended avoiding new and unusual expressions, as rocks: *tanquam scopulum, sic fugias insolens verbum.*

There were several pleadings of his also extant. Besides the elegance of his Latinity, which is necessary, says Atticus, or rather Cicero, not only to every orator, but every Roman citizen of condition, he adds all the ornaments of art, but principally a wonderful talent in painting objects, and placing things in all their lights.⁸

Only two of Cæsar's works remain; his seven books of the war with the Gauls, and his three of the civil war. They are properly speaking only memoirs, and he made them public only as such: *Commentarii*. He wrote them hastily, and even in the midst of his expeditions; solely with the view of leaving materials to writers, for composing a history.⁹ The perspicuity and elegance of style, natural to him, are certainly evident in them: but he has neglected all the shining ornaments a genius so happy as his

could have diffused throughout a work of that nature. All simple and negligent as it may appear, says Hirtius, it is however generally agreed, that no other work, however laboured and polished, can come up to the beauty of Cæsar's Commentaries.¹⁰ His design was only to supply those with materials, who might undertake to compose a history from them in form. "In which," says Cicero, "he may have pleased writers of mean parts, who will not fear disfiguring his natural graces with trivial ornament: but every man of sense will be far from touching or altering them in any manner whatsoever. For nothing in history gives so much pleasure as a clear and elegant brevity of style." *Dum voluit alios habere parata unde auerent, qui vellent scribere historiam, ineptis fortasse gratum fecit, qui volent illa calamistris inurere; sanos quidem homines à scribendo deteruit. Nihil enim est in Historia, pura et illustri brevitate dulcius.* Hirtius has the same remark respecting writers who should conceive thoughts of composing a history from Cæsar's Commentaries. "He certainly supplies them with the means," says he; "but if they are wise, those very means ought for ever to prevent their having such a thought." *Adeo probantur omnium judicio, ut præcepta non præbita facultas scriptoribus videatur.* Mr. Ablancourt's translation of Cæsar's Commentaries is very much esteemed. It might be improved, if some able hand would retouch it in some places.

Cæsar had undoubtedly great wit and the most happy natural parts: but he had also taken pains to cultivate them by assiduous study, and to enrich them with all that was most curious and exquisite in literature; by which means he arrived at excelling almost all the most eloquent orators of Rome in purity of language and delicacy of style.¹¹ I purposely make this remark after Cicero, to excite our young nobility to follow so good an example, in uniting with the praise of valour that of fine sense and polite knowledge. I have seen young Englishmen of distinction, who have done me the honour of a visit, that were well read in the learning of the Greeks and Romans, and no less versed in history. In these points jealousy, or, to speak more justly, emulation, is laudable between nation and nation. The French youth are inferior to none in vivacity and solidity of genius. In my opinion, they ought to pique

6 C. vero Cæsar, si soro tantum vacasset, non alius ex nostris contra Ciceronem nominaretur. Tanta in eo vis est, id acumen, ea concitatio, ut illum eodem animo dixisse, quo bellavit, appareat. Exornat tamen hæc omnia mira sermonis, cujus propriè studiosus fuit, elegantia. *Quintil. l. x. c. l.*

7 Aul. Gell. l. i. c. 10.

8 Cum, inquit Atticus, ad hanc elegantiam verborum Latinorum (quæ etiam orator non sis, et sis ingenuus civis Romanus, tamen necessaria est) adjungit illa oratoria ornamenta dicendi: tum videtur tanquam tabulas bene pictas collocare in bono lumine. *Cic. in Brut. n. 252.*

9 Cæteri quàm bene atque emendatè, nos etiam quàm facilè atque celeriter eos confecerit, scimus. *Hirt. Præf. l. viii. de Bell. Gall.*

10 Constat inter omnes nihil tam operosè ab aliis esse perfectum, quod non horum elegantia Commentariorum superetur. *Hirt. ibid.*

11 Audio (inquit Atticus Cæsarem omnium fere oratorum latine loqui elegantissimè)—Et ut esset perfecta illa bene loquendi laus, multis literis, et his quidem reconditis et exquisitis, summoque studio et diligentia est consecutus. *Cic. in Brut. n. 252, 253.*

themselves upon not giving place in any thing to strangers, and in not abandoning to them the glory of erudition and fine taste. This is what Cæsar seems to advise. His Commentaries ought always to be in their hands. It is the soldier's book. The greatest generals in all times have made him their master. The reading of these memoirs have been always their employment and delight. They find in them the rules of the art military, whether in sieges or battles, reduced to practice. They may learn also there, the manner of composing memoirs, which is no vulgar talent. It were to be wished, that all generals would regularly set down all the operations of the campaigns in which they command. What an assistance would that be to historians, and what a light to posterity! Is there any thing more valuable than the memoirs of the Marshal Turenne printed in the second volume of his life, or than those of James II. king of England, then duke of York?

Hirtius finished what Cæsar could not. The eighth book of the war with the Gauls is his, as well as those of the war of Alexandria, and that of Africa. It is doubted whether he is the author of the book which treats of the war in Spain.

Mr. Abiancourt's translation of Cæsar, as well as of Tacitus, is very good in many things, but wants retouching in many places.

PATERCULUS.

Caius, or Publius, or Marcus Velleius Paterculus flourished in the reign of Tiberius. There is great reason to believe that he was born in the 735th year of Rome, A. D. 15. His ancestors were illustrious by their merit and offices. He was a tribune in the army, when Caius Cæsar, the grandson of Augustus, had an interview with the king of Parthia in an island of the Euphrates.¹ He had a command in the cavalry under Tiberius, and attended that prince nine years successively in all his expeditions, who rewarded him honourably.² He was raised to the prætorship the same year in which Augustus died.³

The time when he began to write his history is not known, nor what it contained. The beginning of it is lost. What has come down to us of it is a fragment of the ancient Greek history with that of the Romans, from the defeat of Perseus to the sixteenth year of Tiberius. He addresses it to M. Vincius, who was consul at that time, and promised one of greater extent. His travels into different regions might have furnished him with very agreeable and curious facts.

His style is highly worthy of the age in which he lived, which was still that of fine taste and pure language. He excels principally in the characters of men, some of which I shall cite at the end of this article.

His narration is judged to be faithful and sincere down to the time of the Cæsars, and in such facts as do not concern them. For, from that time the desire of flattering Tiberius makes him either omit, disguise, or alter the truth in various instances. He accuses Germanicus of cowardice,⁴ or rather of a too soft complacency for the seditious, whilst he gives many others excessive praises. *Quo quidem tempore—pleraque ignare Germanicus.*⁵ He is justly reproached with having praised Tiberius extravagantly. His unfair evasions of offending that emperor appear, as I have already said, in the care he takes to run slightly over the glorious actions of Germanicus, to suppress most of them, and to attack the fame of Agrippina, and other persons hated by Tiberius.

But he is still more unpardonable for loading Sejanus with praises, who occasioned so many misfortunes to the empire, and for having represented him as one of the most virtuous personages the Roman commonwealth had ever produced. *Sejanus, vir antiquissimi moris, et priscam gravitatem humanitate temperans.*⁶ This is nothing to the panegyric he bestows upon him in the sequel. "He previously laid down by many examples the necessity princes were under of assistance in their government, and of associating coadjutors to divide with them the weight of public affairs." *Rarè eminentes viri non magnis adjutoribus ad gubernandam fortunam suam uti sunt—Etenim magna negotia magnis adjutoribus egent.*⁷ Who doubts it? but the question is to make a good choice. He proceeds then to Sejanus, and after having exalted the splendour of his birth, he represents him "as a man, who knows how to temper the severity of power with an air of sweetness, and the cheerful serenity of the ancients; who transacts the most weighty affairs with all the ease of leisure; who assumes nothing to himself and thereby attains every thing; who always is less in his own opinion than in that of the public; whose aspect and behaviour appear calm and tranquil, while the cares of the state afford him no rest. In which judgment of his merits, the court and the city, the prince and the people, contend with each other." "Virum severitatis

⁴ Lib. 2. c. 125.

⁵ A learned commentator (Boëclerus) believes this passage corrupt, and that *gravè* ought to be read. But to correct a text in such a manner, contrary to the faith of manuscripts, is only to guess.

⁶ Lib. 2. c. 116.

⁷ Lib. 2. c. 127, 128.

¹ Vell. Pat. l. xx. c. 101. ² Ib. c. 104. ³ Ib. c. 124.

lætissimæ, hilaritatis priscæ; actu otiosis simillimum; nihil sibi vendicantem, eoque assequentes metientem; vultu vitæ tranquillum, animo exsominem. In hujus virtutum æstimationem jampridem judicia civitatis cum judiciis principis certant." How great was his love of the public good, if we may believe his historian! What application to business! What zeal for the interests of the prince and state! How amiable his character under the oppressive weight of the public business! What moderation, and in a word, what an assemblage of the greatest virtues, attested by the unanimous voices of all the world! In order to know what we are to think of them, let us consider a second picture of the same Sejanus drawn by another master, who did not receive hire from him, and was never suspected of flattery. This was Tacitus, of whom we shall soon speak. "Sejanus Tiberium variis artibus devinxit adeo, ut obscurum adversus alios, sibi uni incautum intectumque efficeret: non tam solertia, (quippe iisdem artibus victus est) quàm deûm ira in rem Romanam; cuius pari exitio vixit, cœditque. Corpus illi laborum tolerans; animus audax, sui obtegens; in alios criminator: juxta adulatio et superbia; palam compositus pudor, intus summa apiscendi libido, ejusque causa modò largitio et luxus, sæpe industria ac vigilantia, haud minùs noxiæ quotiens parando regno finguntur." "Sejanus by various arts gained the ascendant of Tiberius so far, that though that prince was gloomy and impenetrable to every body else, he disguised nothing, and kept no secret from him; which is not so much to be ascribed to the craft and address of that minister, (for he fell by the same arts of cunning and deceit himself) as to the anger of the gods against the Roman empire, to which his power and fall were equally pernicious. He had strength of body to support great fatigues: the character of his mind was presumption, disguise, and malignity in calumniating others. He was at the same time a flatterer to the lowest degree of meanness and haughtiness to excess: his outside wore the appearance of great modesty and reserve; within the lust of gain and ambition wholly engrossed him. His means for the attainment of his ends were luxury and corruption, and sometimes vigilance and application, no less dangerous, when assumed for usurping empire." To say every thing in a word, Sejanus, so much extolled by Paterculus, was the scourge of the divine wrath against the Roman empire: *deûm irâ in rem Romanam*. Persons in high stations, who have the dispensation of graces and advantages, may judge from this of the value they ought to

set upon the praises lavished upon them so immoderately, and often with so little shame.

I have said before that Paterculus excelled particularly in drawing the characters of men. Some of his descriptions are short, which are not the least beautiful; and many of greater extent. I shall repeat here some examples of both.

Marius.

"Hirtus atque horridus, vitæque sanctus; quantum bello optimus, tantum pace pessimus; immodicus gloriæ, insatiabilis, impotens, semperque inquietus." "Marius had something savage and horrid in his nature: his manners were austere, but irreprovable: excellent in war, detestable in peace; greedy, or rather insatiable of glory; violent, and incapable of rest."

Sylla.

"Adeo Sylla dissimilis fuit bellator ac victor, ut, dum vincit, justissimo lenior; post victoriam, audito fuerit crudellior." "Nothing was more different than Sylla at war, and Sylla victorious. In the field, he was milder than the justest; after the victory, more cruel than the most barbarous."⁹

Mithridates.

"Mithridates, Ponticus rex: vir neque silendus, neque dicendus, sine cura. Bello acerrimus, virtute eximius; aliquando fortuna, semper animo maximus: consiliis dux, miles manu, odio in Romanos Annibal." "Mithridates king of Pontus, of whom it is difficult either to speak or to be silent. Most expert in war, of extraordinary valour; sometimes very great by fortune, always by magnanimity: in counsels a general, in execution a soldier, in hatred to the Romans a Hannibal."¹⁰

Mæcenas.

"C. Mæcenas, equestri sed splendido genere natus: vir, ubi res vigillam exigeret, sanè exsominis, providens, atque agendi sciens; simul verò aliquid ex negotio remitti posset, otio ac mollitibus, penè ultra feminam fluens." "Mæcenas descended from an equestrian, but illustrious and ancient family. Where vigilance was necessary, he was able, provident, and active, without allowing himself rest. But as soon as affairs would admit of relaxation, he gave himself up to the charms of ease and voluptuousness with almost more than female softness."¹¹

⁹ Tacit. An. l. iv. c. 1.

⁹ Lib. ii. c. 9.

¹⁰ Lib. ii. c. 25.

¹¹ Lib. ii. c. 18.

¹² Lib. ii. c. 68.

Scipio Æmilianus.

"P. Scipio Æmilianus, vir avitis P. Africani paternisque L. Pauli virtutibus simillimus, omnibus belli ac togæ dotibus, ingenique ac studiorum eminentissimus seculi sui: qui nihil in vita nisi laudandum aut fecit, aut dixit, ac sensit — Tam elegans liberalium studiorum omnique doctrinæ auctor et admirator fuit, ut Polybium Panætiumque præcellentes ingenio viros, domi militisque secum habuerit. Neque enim quisquam hoc Scipione elegantius intervalla negotiorum otio dispanxit: semperque aut belli aut pacis servit artibus; semper inter arma ac studia versatus, aut corpus periculis, aut animum disciplinis exercuit." "P. Scipio Æmilianus, who perfectly resembled Scipio Africanus his grandfather, and Paulus Æmilius his father, in their virtues, was the most eminent person of his age for all the talents, natural and acquired, that could adorn peace or war; a man, who never during his life either did, said, or thought any thing but what deserved praise. He was so great an admirer of polite learning and science in general, in which he himself excelled, that he always had with him, as well at home as in the field, Polybius and Panætius, two of the most illustrious learned men of his time. No man knew how to apply the intervals of leisure from business with more elegance and taste than this Scipio: and as the arts of war or peace were his continual employments, between arms and books, he incessantly exercised either his body in the dangers and fatigues of the one, or his mind in the refined studies and speculations of the other."¹

Cato of Utica.

"M. Cato, genitus proavo M. Catone, principe illo familiæ Porciæ: homo virtuti simillimus, et per omnia ingenio diis quàm hominibus propior: qui nunquam rectè fecit, ut facere videretur, sed quia aliter facere non poterat; cuique id solum visum est rationem habere, quod haberet justitiam: omnibus humanis vitis immunis, semper fortunam in sua potestate habuit." "Cato of Utica's great grandfather was Cato the censor, that illustrious head of the Porcian family. He was in all things more like a god than a man, and seemed virtue itself in human shape. He never did any thing virtuous for the sake of seeming virtuous, but because he could not do otherwise; and never thought any thing could have reason, that wanted justice. Exempt from all human vices, fortune, to which he never

gave way, was in his power, and in a manner his slave."²

Pompey.

"Innocentia eximius, sanctitate præcipuus, eloquentia medius: potentia, quæ honoris causâ ad eum deferretur, non ut ab eo occuparetur, cupidissimas. Dux bello peritissimus; civis in toga (nisi ubi vereretur ne quem haberet parem) modestissimus. Amicitiarum tenax, in offensâ exorabilis, in reconcilianda gratia fidelissimus, in accipienda satisfactione facillimus. Potentia sua nunquam, aut rarò, ad impotentiam usus: penè omnium vitiorum expertus, nisi numeraretur inter maxima, in civitate libera dominaque gentium indignari, cum omnes cives jure haberet pares, quemquam æqualem dignitate conspiciere." "Pompey's manners were blameless and noble, his probity supreme, his eloquence indifferent. He was extremely fond of power, when conferred upon him freely and for his honour, but not so much as to seize it by violence: a most able general in war, a most moderate citizen in peace, except when he apprehended having an equal. Tenacious in friendship, easy in forgiving injuries, most faithful in reconciliation, and far from rigid in exacting satisfaction. He never, or very rarely, employed his power in committing violence and oppression; and might be said to be exempt from all vices, if it were not the greatest in a free state, the mistress of the world, where all the citizens were equal by right and constitution, to be incapable of suffering any equal in power and authority."³

Cæsar.

"Cæsar forma omnium civium excellentissimus, vigore animi acerrimus, munificentia effusissimus, animo super humanam et naturam et fidem evectus: magnitudine consiliorum, celeritate bellandi, patientia periculorum, Magno illi Alexandro, sed sobrio neque iracundo simillimus: qui denique semper et somno et cibo in vitam non in voluptatem uteretur." "Cæsar, besides excelling all the Romans in the beauty of his person, surpassed them still more in the force and superiority of his genius, in munificence and liberality to profusion, and in valour and ability above either human nature or belief. The greatness of his projects, the rapidity of his conquests, and his intrepid valour in confronting dangers, make him entirely resemble Alexander the Great, but Alexander sober, and free from rage. Food and rest he used only for refreshment, not for pleasure."⁴

¹ Lib. i. c. 12. ¹ibid. c. 13.

² Lib. ii. c. 35.

³ Lib. ii. c. 29.

⁴ Lib. ii. c. 41.

TACITUS.

Tacitus (*C. Cornelius Tacitus*) was older than the younger Pliny, who was born in the year of Christ 61. Vespasian first raised him to dignities, in which Titus continued him, and to which Domitian added greater. He was prætor in the reign of the latter, and in that of Nerva was substituted consul to Verginius Rufus, whose panegyric he composed.⁵ He married the daughter of Cn. Julius Agricola, famous for the conquest of Britain, A. D. 77, or 78. He had been four years out of Rome with his wife, when Agricola died, A. D. 93. Lipsius believes that Tacitus left children, because the emperor Tacitus said, he was descended from him or from the same family.⁶ Learning rendered Tacitus more illustrious than his dignities.⁷ He pled, even after he had been consul, with great reputation for eloquence, of which the peculiar character was weight and majesty. He had been highly esteemed from his first appearance. Pliny the younger was one of his earliest admirers, and they contracted a great friendship with each other.⁸ They mutually corrected each other's works; which is of great service to an author.⁹ This I experience every day with the utmost gratitude, and am conscious that I owe the success of my labours to the like assistance of no less learned than affectionate friends.

It appears that Tacitus published some orations or pleadings.¹⁰ He also composed some pieces in verse; and there is a letter of his among those of Pliny. But he is only known in these days, by his historical writings, to which St. Sidonius¹¹ tells us he did not apply himself, till after he had endeavoured in vain to persuade Pliny to undertake his subject. He composed his *Description of Germany*¹² during Trajan's second consulship: at least there is room to conjecture so. *The Life of Agricola*, his father-in-law, appears also from the preface to have been one of his first works, and written in the beginning of Trajan's reign. He employs part of the preface in describing the tempestuous times of a cruel reign at enmity with all virtue: *Sæva et infesta virtutibus tempora*. This was that of Domitian. He concludes it with observing, that he dedicates that book to the glory of Agricola his father-in-law; and hopes that the respect and gratitude which induced him to undertake it, will either recommend it to favour, or be its excuse: *Hic interim liber honori Agri-*

cola soceri mei destinatus, professione pietatis aut laudatus erit, aut excusatus. He then proceeds to his subject, and explains the principal circumstances and actions of his father-in-law's life. This piece is one of the finest and most valuable fragments of antiquity; in which soldiers, courtiers, and magistrates, may find excellent instructions.

The great work of Tacitus is that wherein he wrote the history of the emperors,¹³ beginning at the death of Galba, and concluding at that of Domitian: which is what we call his *Histories*. But of the twenty-eight years contained in this history, from the year sixty-nine to ninety-six, we have only the year sixty-nine and part of seventy. To compose this work, he asked memoirs of particular persons, as he did of Pliny the younger, concerning his uncle's death.¹⁴ Such as were desirous of being known to posterity sent him accounts without application, which we find from the same Pliny, who was in hopes of being immortalized by that means.¹⁵ The letters which he wrote him upon that head, seem to be of the year 102 or 103, whence we may judge at what time Tacitus applied himself to that work.

He intended, after having finished it, if God prolonged his life, to write also the history of Nerva and Trajan: happy times, says he, in which a man might think as he pleased, and speak as he thought. *Rara temporum felicitate, ubi sentire quæ velis, et quæ sentias dicere licet*.¹⁶ But it does not appear that he executed this design. Instead of that he resumed the Roman history from the death of Augustus to the reign of Galba; and this is the part that he calls his *Annals*, because he endeavoured to introduce all the events under their respective years, which, however, he does not always observe in relating some wars. In a passage of these annals, he refers to the history of Domitian,¹⁷ that he had written before: which shows that the *Histories* were prior to the *Annals*, though the latter are placed first. And it is observed that the style of his histories is more florid and diffuse than that of his annals, which is more grave and concise, without doubt, as he was naturally inclined to brevity, from his having grown stronger in that habit the more he wrote. Of the four emperors, whose history Tacitus wrote in his annals, Tiberius, Caligula, Claudius, and Nero, only that of the first and last are come down to us almost entire; we, however, want three years of Tiberius, and the latter part of Nero's reign. Caligula is entirely lost, and we have only the end of Claudius.

5 Plin. Ep. i. l. 2.

6 Vopisc. in vit. Tacit.

7 Plin. Ep. i., xi. l. 2.

8 Id. Ep. ii. l. 7.

9 Id. Ep. vii. l. 8.

10 Id. Ep. x. l. 9.

11 Sidon. Ep. xxii. l. 4.

12 De Germ. c. 37.

13 Tacit. Hist. l. i. c. 1.

14 Plin. Ep. xvi. l. 6.

15 Id. Ep. xvi., xx. l. 6.

16 Tacit. Hist. l. i. c. 1.

17 Annal. l. xl. c. 11.

He designed also to have written the history of Augustus: but St. Jerom¹ seems to have known nothing more of his, except what he treated of from the death of that prince to that of Domitian, which, says he, made thirty books.

If what Quintilian says of a celebrated historian of his times, whom he does not name, is to be understood of Tacitus, as some authors have believed, it seems that he had been obliged to retrench some places in which he was too free and bold. The passage of Quintilian says,² "There is an historian who still lives for the glory of our age, and who deserves to live eternally in the remembrance of succeeding times. He will be called by his name hereafter, at present it suffices that we know him. This great man has admirers, but no imitators; his freedom and love of truth having done him hurt, notwithstanding his having suppressed part of his writings. In what remains, however, we perfectly discern the elevation of his genius, and his bold and noble manner of thinking."

It is a misfortune that we are no better informed in the circumstances of the life of so illustrious a writer: nor do we know any thing regarding his death. The emperor Tacitus, who held it an honour to descend from our historian's family, decreed, that his works should be placed in all libraries, and that ten copies should be made of them every year at the expense of the public, in order to their being more correct.³ This was a wise and laudable precaution, which, one would think, might have preserved entire a work so worthy in all its parts of being transmitted to posterity.

Tacitus boasts of having written without passion or prejudice, *sine ira et studio*, and of having strictly adhered to truth in every thing, which is the principal duty of an historian. To effect this, Tacitus had occasion not only for a great love of truth, but a very fine discernment, and much precaution. For he observes himself, in speaking of the histories of Tiberius, Caligula, Claudius, and Nero, that whether they were written during their lives or after their deaths, falsehood was equally notorious in them, fear having dictated some of them, and hatred others: *Florentibus ipsis, ob metum falsæ; postquam occiderunt, recentibus odiis compositæ sunt.*⁴ "There are," says he, "two failings highly apt to injure truth: either abandoned adulation, or revengeful hatred against

those that reign. It is not to be expected, that historians, who are either flatterers or declared enemies, should have any great regard for posterity." *Veritas pluribus modis infracta——libidine assentandi, aut rursus odio adversus dominantes. Ita neutris cura posteritatis, inter infensos vel obnoxios.*⁵ "We are presently disgusted with the sordid flattery of a writer, but hear slander and reproach with pleasure: for adulation bears the odious brand of slavery, and malignity the specious show of freedom." *Sed ambitionem scriptoris facillè aduerseris, obrectatio et livor pronis auribus accipiuntur: quippe adulatione sædum crimen seruitutis, malignitati falsa species libertatis inest.* Tacitus promises to avoid these two extremes, and professes to be above all prejudices. *Incorruptam fidem professis, nec amore quisquam, et sine odio dicendus est.*

The part which we have of Tiberius' reign is judged Tacitus' masterpiece in respect to politics. The rest of his history, say the same critics, might be composed by another as well as by him; Rome not wanting declaimers to paint the vices of Caligula, the stupidity of Claudius, and the cruelties of Nero. But to write the life of a prince like Tiberius, required a historian like Tacitus, who could unravel all the intrigues of the cabinet, assign their real causes to events, and distinguish pretext and appearance from actual motives and truth. It is useful and important, I confess, to unmask false virtues, to penetrate the mists and obscurity, in which ambition and the other passions conceal themselves, and to set vice and guilt in full light, in order to inspire the horror of them. But is it not to be feared that a historian, who almost every where affects to dive into the human heart, and to sound it in its most secret recesses, gives us his own ideas and conjectures for reality, and frequently lends men intentions they never had, and designs of which they never thought? Sallust throws political reflections into his history, but he does it with more art and reserve, and thereby renders himself less suspected. Tacitus, in his history of the emperors, is more attentive to exposing the bad, than showing the good: which perhaps is because all those whose lives we have from him are bad princes. As to the style of Tacitus, we must own it very obscure: it is sometimes even hard and stiff, and has not all the purity of the good authors of the Latin tongue. But he excels in expressing much sense in few words, which gives a very peculiar force, energy, and spirit, to his discourse. He excels also in painting objects, sometimes with brevity, and sometimes with greater extent, but always in lively colours, that in a manner set what he

¹ Hieron. Zachar.

² Superest adhuc, et exornat ætatis nostræ gloriam, vir seculorum memoria dignus, qui olim nominabitur, nunc intelligitur. Habet amatores nec imitatores, ut libertas, quamquam circumcisis quæ dixisset, ei nocuerit; sed elatum abunde spiritum et audaces sententias deprehendens etiam in iis quæ manent. *Quintil.* l. x. c. 1.

³ Vorlæc. in vit. Tacit. Imper. ⁴ *Annal.* l. i. c. 1.

⁵ *Histor.* l. i. c. 1.

describes before our eyes, and (which is his peculiar character) suggest much more than they express. Some examples will prove this better than what I say; which I shall extract solely from the life of Agricola.

Passages of Tacitus full of spirit.

1. Tacitus speaks of the Britons, who voluntarily supplied recruits, paid tributes, and submitted to all other impositions, when the governors sent from Rome acted with lenity and moderation, "but suffered cruelty and violent treatment with great reluctance, sufficiently subjected to obey, but not to be used like slaves." *Has (injurias) ægrè tolerant, jam domiti ut pareant, nondum ut servantur.* Cap. xiii.

2. "Agricola, having applied himself from the first year of his government to put a stop to these disorders, reinstated the desire of peace, which before, either through the negligence or collusion of his predecessors, was no less terrible than war." *Hæc primo statim anno comprimendo, egrægiæ famam paci circumdedit, quæ, vel incuriâ vel tolerantia priorum, haud minus quam bellum timebatur.* Cap. xx.

3. Domitian's reception of Agricola at his return from his glorious campaigns, is one of the finest passages in Tacitus, but the spirit of it cannot be rendered in a translation. *Exceptus brevis osculo, et nullo sermone, turbæ servientium immixtus est.* "After a short cool embrace, in which the emperor did not say one word, he was left to mix with the crowd of courtiers attending." Cap. xl.

4. The same may be said of what immediately follows. Agricola, who perfectly knew the genius of the court, and how offensive the reputation of a successful general is to idle courtiers without merit, to soften the lustre of it, and to elude envy, thought proper to lead a quiet life remote from business. *Cæterum, ut militare nomen, grave inter otiosos, aliis virtutibus temperaret, tranquillitatem atque otium penitus auxit.* "He retained a moderate equipage, treated every body with affability, and went abroad in the company of only one or two friends; so that the generality of people, who usually judge of the merit of men by the splendour and magnificence of their train, when they saw and considered him, asked themselves whether that was the so much celebrated Agricola, and could scarce believe it was him under such an appearance." *Cultu modicus, sermone facilis, uno aut altero amicorum comitatus: adeo ut plerique, quibus magnos viros per ambitionem æstimare mos est, quærerent famam, pauci interpretarentur.* How are we to render these two last phrases, *quærerent famam, pauci interpretarentur*, which have a profound sense, that it is almost necessary to guess? The historian has provided for this,

in telling us, people generally judge of great men by the splendour that surrounds them; *plerisque magnos viros per ambitionem æstimare mos est.* He distinguishes two kinds of spectators. The one, which is the most numerous, in seeing the modesty of Agricola's outside, inquired upon what his reputation could be founded, not perceiving the usual marks of it: *ut plerique quærerent famam.* The other, which is the smallest in number, did not judge by vulgar opinion, but comprehended, that great merit might be concealed under a simple and modest appearance, and that the one was not incompatible with the other: *pauci interpretarentur.*

5. Tacitus sometimes mingles his facts with very judicious reflections. This he does in a wonderful manner, where he extols the wisdom and moderation with which Agricola managed and soothed the violent temper of Domitian, though himself had frequently experienced bad treatment from it. "Proprium humani ingenii est, odisse quem læseris. Domitiani verò natura præceps in iram, et quo obscurior, eo irrevocabillior, moderatione tamen prudentiæ Agricolæ leniebatur: quia non contumacia, neque inani jactatione libertatis, famam fatumque provocabat. Sciant quibus moris illicita mirari, posse etiam sub malis principibus magnos viros esse, obsequiumque ac modestiam, si industria ac vigor adsint, eò laudis excedere, quò plerique per abrupta, sed in nullum reip. usum, ambitiosa morte inclauerunt." Cap. xlii. "Though it is of the nature of man to hate him whom he has injured, and Domitian was excessively prone to anger, and the more irreconcilable the more he concealed it, Agricola knew how to pacify him by his prudence and moderation. For he never aggravated his rage by contumacious behaviour, and was not so eager after fame, as to urge on his fate for the empty reputation of a generous freedom of speech. Let those who admire such a rashness of generosity, learn from him, that great men may live under bad princes; and that submission and modesty, if supported with vigour and industry, may acquire greater fame, than many have aspired to by a bold and hardy behaviour, without any emolument to the public, and with no other fruit to themselves, except a more distinguished death."

QUINTUS CURTIUS. (*Rufus.*)

I have already observed elsewhere, that the time when Quintus Curtius lived is not precisely known. The learned are very much divided on this head; some placing him in the reign of Augustus or Tiberius, and others, in that of Vespasian, and even of Trajan.

He wrote the History of Alexander the Great, in ten books, of which the two first have not come down to us, but which have been supplied

by Freinshemius. His style is florid, agreeable, and full of wise reflections; and he has many very fine harangues, but generally too long, and sometimes in the spirit of declamation. His thoughts, which are full of wit, and often very solid, have, however, an affected glitter and conceit, which do not seem to belong to the Augustan age. It would be surprising enough, that Quinctilian, in his enumeration of the Latin authors, should have omitted to mention a historian of the merit of Quintus Curtius, had the latter lived before him.

He is reproached with many faults of ignorance in respect to astronomy, geography, the dates of his events, and even the most known effects of nature, as having thought the moon indifferently eclipsed when new, and when at the full. *Lunam deficere, cum aut terram subiret, aut sole premeretur.*¹

There is an excellent French translation of this author by M. Vaugelas.

SUETONIUS. (*Caius Suetonius Tranquillus.*)

Suetonius was the son of Suetonius Lenis,² a tribune of the thirteenth legion, who was at the battle of Bedriacum, where the troops of Vitellius were defeated by Otho. He flourished in the reigns of Trajan and Adrian. Pliny the younger had a great affection for him, and was very desirous of having him always with him.³ He says, that the more he knew him the better he loved him, on account of his probity, politeness, good conduct, application to letters, and erudition; and did him many services.

Suetonius composed a great number of books, which are almost all lost. Only his History of the first Twelve Emperors, and part of his treatise upon the celebrated grammarians and rhetoricians have come down to us. This history is very much esteemed by the learned. He confines himself in it less to the affairs of the empire, than the persons of the emperors, whose particular actions, domestic behaviour, and inclinations in general, good or bad, he relates. He does not observe the order of time, and no history ever differed more from annals than this. He reduces the whole to certain general heads, setting down under each all that relates to it. His style is strong and simple, in which it plainly appears, that he was more intent on truth than eloquence. He is blamed for having given too much license to his pen, and for being as loose and debauched in his narrations, as the emperors, whose history he writes, were in their lives.

LUCIUS FLORUS.

Florus is believed to have been a Spaniard, of the family of the Senecas, and to have had the names of *L. Annaeus Seneca* by birth, and of *L. Julius Florus* by adoption.⁴ We have an abridgment of his, in four books, of the Roman History from Romulus down to Augustus, which seems to have been written in Trajan's time. It has not the usual fault of abridgments, of being dry, barren, and insipid. Its style is elegant, agreeable, and has a kind of poetical vivacity in it: but in some places it has too much emphasis and pomp, and sometimes even bombast. It is not an abridgment of Livy, with whom he often differs. We have said before, that it is doubted whether the epitomes or summaries at the head of the books of Livy were written by Florus.

JUSTIN.

Justin is believed to have inscribed his abridgment of the History of Trogius Pompeius to Titus Antoninus: but that is not certain, there having been several emperors of the name of Antoninus. Trogius Pompeius was one of the illustrious writers of the time of Augustus, and is ranked among the historians of the first class, Livy, Sallust, and Tacitus. His work was of immense extent, and contained the Greek and Roman history entire down to the reign of Augustus. Justin has abridged it in the same number of books; for which we are not obliged to him, if it be true that his abridgment occasioned the loss of the original. We may judge of the purity and elegance of Trogius' style from the speech of Mithridates to his troops, which Justin has inserted entire in his thirty-eighth book. It is very long and indirect. For Justin takes notice, that Trogius did not approve the direct harangues introduced by Livy and Sallust in their histories. It is at the end of this speech, after having represented to his soldiers, that he is not going to lead them into the frightful solitudes of Scythia, but the most fertile and opulent region in the universe, that Mithridates adds; "Asia expects them with impatience, and seems to offer them her hand, whilst she loudly invokes their aid: so much have the rapaciousness of proconsuls, the oppressions of tax-farmers, and the vexations of unjust tribunals, inspired them with hatred and detestation for the Romans." "*Tantumque se avida expectat Asia, ut etiam vocibus vocet: adeo illis odium Romanorum incussit rapacitas proconsulum, sectio publicanorum, calumniae litium.*"

¹ Lab. iv. c. 10.

² Sueton. in Othone. c. x.

³ Plin. l. x. Ep. 100.

⁴ Vossius.

The style of Justin is clear, intelligible, and agreeable: we find in him from time to time fine thoughts, solid reflections, and very lively descriptions. Except a small number of words and modes of speech, his Latinity is sufficiently pure; and it is very probable that he generally uses the words and even phrases of Trogus.

AUTHORS OF THE AUGUST HISTORY.

The lives of the Roman emperors from Adrian to Carinus is called *The August History*. Those authors are Spartianus, Lampridius, Vulcatius, Capitolinus, Pollio, and Vopiscus. They all lived in the reign of Dioclesian, though some of them wrote also under his successors. I shall not enter into a particular account of their works, which have no relation to my history.

AURELIUS VICTOR.

Aurelius Victor lived in the reign of Constantius, and long after. He is believed to have been an African. He was poor in the country, and the son of a very poor illiterate man. He seems to have been a pagan at the time he wrote. His History of the Emperors begins at Augustus, and goes on to the twenty-third year of Constantius. We have also, of the same author's, an abridgment of the Lives of Illustrious Men, almost all Romans, from Procas to Julius Cæsar. Others ascribe this little work to Cornelius Nepos, Æmilius Probus, &c., but Vossius maintains that it is Aurelius Victor's. This abridgment contains little more than proper names and dates, and for that reason does not suit children, who cannot learn much Latinity from it.

AMMIANUS MARCELLINUS.

Ammianus Marcellinus was by nation a Greek, of a considerable family in the city of Antioch. He served many years in the Roman armies in the time of Constantius. He afterwards quitted the troops, and retired to Rome, where he wrote his history, which he divided into thirty-one books. He continued it from Nerva, where Suetonius ends, to the death of Valens. We have now only the last eighteen books, which begin at the end of the year 353, immediately after the death of Magnentius. Though he was a Greek, he wrote it in Latin, but in a Latin that savours much of the Greek and the soldier. This defect, says Vossius, is made amends for by the author's other qualities, who is grave, solid, judicious, very sincere, and a great lover of truth. His zeal for idols and their adorers, particularly for Julian the apostate, whom he makes his hero, is very evident;

and on the contrary he appears much the enemy of Constantius. He does not, however, fail to treat both the one and the other with justice.

EUTROPIUS.

Eutropius wrote his Abridgment of the Roman History in the reigns of Valentinian and Valens, but by order of the latter, to whom he inscribes it. To judge of it by his style, one would believe him rather a Greek than a Roman.

CHAPTER III.

OF ORATORS.

INTRODUCTION.

I am to speak in this place of that part of polite learning, which has the most beauty, solidity, greatness, and splendour, and is of the most extensive use, namely, Eloquence. This is a talent, which exalts the orator above the vulgar of mankind, and almost above humanity itself; which renders him in some measure the guide and arbiter of the most important deliberations; which gives him an empire over the mind, the more admirable as it is entirely voluntary, and founded solely upon the force of reason placed in all its light: in a word, which enables him to sway the heart to his purposes, to overcome the most obstinate resistance, and to inspire such sentiments as he pleases; joy or sorrow, love or hatred, hope or fear, compassion or resentment. If we represent to ourselves the numerous assemblies of Athens or Rome, in which the greatest interests of those states are considered, and where the orator, from the tribunal of harangues, reigns by his eloquence over an immense people, who hear him with a profound silence interrupted only by applauses and acclamations; of all that the world ever contained of magnificent in appearance, and most capable of dazzling the mind of man, is there any thing so grand, so soothing to self-love as this?

What still greatly exalts the value of eloquence, according to the judicious reflection of Cicero, is the amazing scarcity of good orators in all ages.² If we look back into all other professions, arts, and sciences, we find numbers distinguished for excelling in them, generals, statesmen, philosophers, mathematicians, physicians, in a word, great persons in every way. We cannot say quite the same respecting poets; I mean such as have attained perfection in their art: the number of these has always been ex-

5 Lib. i. Orat. n. 6.—16.

treimely small, although much greater than that of good orators. What I now say ought to seem the more surprising, as in respect to the other arts and sciences, it is generally necessary to imbibe them from sources devious and unknown, and not of common use; whereas the talent of speaking is a thing merely natural, that seems to be within every one's capacity, that has nothing in it obscure or abstracted, and of which one of the principal rules and most essential virtues is to express one's self clearly, without ever departing from nature. It cannot be said, that, among the ancients, the success of the other arts proceeded from a greater number of persons being induced by the allurements of rewards to apply themselves to them. As well at Athens as Rome, the two great theatres in which the talents of the mind shone out with most lustre, no study was ever cultivated more universally, nor with greater application and ardour, than that of eloquence. And we ought not to wonder at it. In republics like these, where all the affairs of the state were examined in common; where war and peace, alliances and laws, were deliberated upon either before the people or senate, or with both; and where every thing was determined by plurality of voices; the talent of speaking must necessarily have prevailed. Whoever spoke in these assemblies with most eloquence, became by necessary consequence the most powerful. Hence the youth, of any ambition, did not fail to apply themselves with the utmost diligence, to a study, that alone opened the way to riches, credit, and dignities. Whence therefore was it, that, notwithstanding the application and efforts of so great a number of excellent geniuses, the great advantages in respect to fortune, and the attraction of so soothing a reputation, the number of excellent orators has always been so small? The reason is evident, and we ought to conclude, that of all the arts which are the object of human study, eloquence must necessarily be the greatest, the most difficult, and that which requires the most talents, and talents entirely different and even opposite in appearance, for succeeding in it.

Every body knows that there are three kinds of style, the great or sublime, the common or simple, and the mediate or florid, which holds the mean between the other two.

In the sublime kind,¹ the orator employs whatever is most noble in the thoughts, most

lofty in the expressions, most bold in the figures, and most strong and pathetic in the passions. His discourse is then like an impetuous torrent, incapable of being stopped or kept in, which in its violence bears away those that hear it, and forces them, whether they will or not, to follow it wheresoever it hurries them. But this is not the place for treating of this subject, which would alone prove the extent of the talents necessary to eloquence.

The simple style² is quite different. It is clear, pure, intelligible, and nothing more. It has no thoughts of soaring, and endeavours only to be understood. It values itself solely upon a peculiar purity of language, great elegance, and refined delicacy. If it sometimes ventures upon ornament, that ornament is entirely simple and natural. Horace's expression, *simplex munditiis*, is the best I can use to describe this style; of which Phædrus and Terence are the most perfect models.

A third species of eloquence is in a manner the mean between the other two, and is therefore called the mixed, florid, or mediate style.³ It has neither the delicacy of the latter, nor the force and thunder of the former. It borders upon both, but without attaining to, or resembling either. It participates of the one and the other, or, to speak more justly, it is neither the one nor the other. The orator, in this way, designedly uses the glitter of metaphors, the glow of figures, agreeable digressions, harmony of disposition, and beauty of thoughts; retaining always, however, the mild and temperate character peculiar to it: so that it may then be compared to a stream, that rolls its silver waves through flowery banks shaded with verdant trees.

Each of these kinds of eloquence is highly estimable in itself, and acquires all writers that succeed in them great reputation. But the sublime⁴ rises infinitely above the other two.

2 Contrà [sunt quidam] tenues, acuti, omnia docentes, et dilucidiora non ampliora facientes, subtili quadam et pressa oratione limati—Alii in eadem jejunitate concinniores, id est faceti, florentes etiam, et leviter ornati. *Orat.* n. 20.

3 Est autem quidam interjectus medius, et quasi temperatus, nec acumine posteriorum, nec fulmine utens superiorum: vicinus amborum, in neutro excellens: utriusque particeps, vel utriusque (si verum quissimus) potius expertus. *Orat.* n. 21.

Medius hic modus et translationibus crebrior, et figuris erit jucundior; egressionibus amœnus, compositione aptus, sententiis dulcis: lenior tamen, ut amnis lucidus quidam, et virentibus utrinque sylvis inunbratus. *Quintil.* l. xii. c. 10.

4 Tertius est amplius, copiosus, gravis, ornatus, in quo profecto vis maxima est. Hic est enim, cujus ornatum dicendi et copiam admiratæ gentes, eloquentiam in civitatibus plurimum valere passæ sunt: sed hanc eloquentiam, quæ cursu magno sonituque ferretur, quam suspicerent

1 Grandiloqui [quidam] ut ita dicam fuerunt, cum ampla et sententiarum gravitate, et majestate verborum; vehementes, varii, copiosi, graves, ad permovendos et convertendos animos instructi et parati. *Cic. in Orat.* n. 20.

At ille qui saxa devolvat, et pontem indignetur, et ripas sibi faciat, multus et torrens iudicem vel nitentem contrà feret, cogetque ire qua rapit. *Quintil.* l. xii. c. 10.

It is this kind of eloquence which excites admiration, ravishes applause, and sets all the passions of the soul in motion; that sometimes by its impetuosity, its thunders, throws trouble and emotion into the mind, and sometimes insinuates itself with a majesty of sweetness, a dignity of softness, irresistibly tender and affecting.

It is the union of all these parts which forms the perfect orator; and it is easy to perceive how difficult and extraordinary it is for one man to possess so many different qualities. The enumeration, which we shall soon make of the ancient Greek and Latin orators, will show us some, who have confined themselves with success to the two latter kinds, but very few who have been able to attain to the sublime, and still fewer who have succeeded in all the three at the same time. What renders success in this respect so difficult and extraordinary, is, that the excellent qualities which form the three kinds of style, have each a defect, that borders very close upon them, which adorns itself with their name, which does indeed resemble them in some measure, but at the same time alters and vitiates them, by carrying them too far, by making simplicity degenerate into meanness, ornament into tinsel and glare, and the great and sublime into empty swell and bombast. For it is in style, as in virtue. There are in the one and the other certain bounds and modifications to be observed, beyond which lie the vicious extremes:

Est modus in rebus, sunt certi denique fines,
Quos ultra citraque nequit consistere rectum. *Hor.*

Extremes the more to be feared, as they seem to spring from virtue itself, and confound themselves with it. The Greeks call this excess *κακὸς λόγος*, vicious affectation.⁵ It appears in the three kinds of style, when they exceed the bounds of the just and the true, when the imagination throws off the guidance of the judgment, and the mind is dazzled with a false appearance of the good: this, in respect of eloquence, is the greatest and most dangerous of faults, because, instead of being avoided like others the phantom is pursued as merit. There is also one virtue common to all the three kinds of style, with which I shall conclude.⁶ Among

omnes, quam admirarentur, quam se assequi posse diffident. Hujus eloquentiæ est tractare animos, hujus omni modo permovere. Hæc modò perfringit, modò irrepit in sensus: inserit novas opiniones, evellit insitas. *Orat. n. 97.*

5 *Κακὸς λόγος*, id est mala affectatio, per omne dicendi genus peccat.—Ita vocatur, quicquid est ultra virtutem, quoties ingenium judicio caret, et specie boni fallitur: omnium in eloquentia vitiorum pessimum; nam cetera cum vitentur, hoc petitur. *Quintil. l. viii. c. 3.*

6 Habet omnis eloquentia aliquid commune. *Quintil. l. x. c. 2.*

orators, and the same may be said of historians, poets, and all writers, there are an infinite variety of styles, geniuses, and characters, which occasions so great a difference between them, that scarce one can be found, who perfectly resembles another. There is, however, a kind of secret resemblance and common tie between them, which makes them approach, and unites them with each other. I mean a certain delicacy and refinement of taste, a kind of tincture of the true and the fine, a manner of thinking and expressing themselves, of which nature itself is the source; in fine, a something which it is easier to conceive than express, by which a reader of taste and sense discerns the works both ancient and modern, that bear the stamp of pure and elegant antiquity. And this is what young persons, who desire to make any progress in polite learning, ought to make the principal object of their care and application: I mean to study in the works of the learned those natural beauties, which are the growth of all ages and all languages, and to make themselves familiar with them by a serious and repeated intercourse with the authors, wherein they are to be found, in order to attain so happy a taste as to discern them at first sight, and, if I may venture the expression, to perceive them like fragrant odours almost by the scent.

ARTICLE I.

OF THE GREEK ORATORS.

SECT. I.

Age in which Eloquence flourished most at Athens.

Greece, so fertile in fine geniuses for all the other arts, was a long time barren in respect to eloquence, and, before Pericles, may in some measure be said to have only spoke like an infant, and that till then she had but a small idea, and set little value upon the talent of speaking.⁷ It was at Athens that eloquence began first to appear with splendour. And it is not surprising that it was not in honour there, till after many ages. Eloquence does not usually grow up amidst the cares that are necessary in founding a state, and the tumult of wars. She

7 Græcia—omnes artes vetustiores habet, et multo antè non inventas solum, sed etiam perfectas, quam est à Græciis elaborato vis dicendi atque copia. In quam cum intueor, maxime mihi occurrunt, Attice, et quasi lucent Athenæ tuæ, quæ in urbe primum se orator extulit.—Non in constitutibus Remp. nec in bella gerentibus—Næc cupiditas dicendi solet. Pacis est comes, otique socia, et jam bene constitutæ civitatis quasi alumna quædam eloquentia. *Cic. in Brut. n. 26, et 43.*

is the friend of peace, and the companion of tranquillity, and requires, if I may venture the expression, for her cradle a commonwealth already well established and flourishing. But what ought to appear surprising, is, that eloquence, almost in her birth, and from her first appearance, (which Cicero dates in the time of Pericles) should on a sudden attain to such a height of perfection.¹ Before Pericles there was no work or discourse in which any trace of beauty or ornament appeared, or which expressed the orator; and his harangues displayed even then whatever is finest, most vigorous, and most sublime in eloquence.²

Pericles, whose view was to render himself powerful in the republic, and to sway in the assemblies of the people, considered eloquence as the most necessary means for the attainment of these ends, and devoted himself wholly to it. The natural excellency of his genius supplied him with whatever was wanting for his success, and the great application he had before made to philosophy under Anaxagoras, had taught him by what springs the human heart was to be moved and actuated at will.³ He employed with wonderful art sometimes the charms of insinuation to persuade, and sometimes the force of vehement passions to oppose and subdue. Athens, who saw a new light shine out in her bosom, charmed with the graces and sublimity of his discourse, admired and feared his eloquence.⁴ It is observed, that, at the very time he opposed the passions of the people with a kind of inflexible obstinacy, he knew how to please them, and had the address to bring them over insensibly to his opinion.⁵ The comic poets accordingly, in their satires upon him (for at that time they did not spare the most powerful)

said to his praise on one side, that the goddess of persuasion with all her charms dwelt on his lips; and on the other, that his discourse had the vehemence of thunder, and that it always left behind it a kind of stimulation in the souls of his hearers.⁶ By this extraordinary talent of speaking, Pericles held during forty years, as well in war as peace, an entire authority over the most inconstant and capricious, and at the same time the most jealous people of their liberty in the world, whose discouragement in disgrace it was sometimes necessary to remove, as it was sometimes to abate their pride, and to check their rashness in success.⁷ Hence we may judge of the power and value of eloquence.

Though Pericles left no piece of eloquence behind him, he however deserves to be ranked at the head of the Greek orators; and the more so, according to Cicero,⁸ because it was he who first taught Athens a taste for sound and perfect eloquence, placed it in honour, showed its true use and destination, and made its salutary effects evident by the success which attended his harangues.

I proceed now to speak of the ten Athenian orators, of whose lives Plutarch has given us an abridgment, and shall treat only of those, who are most known, with some extent.

Of the Ten Greek Orators.

ANTIPHON.

Antiphon improved himself very much in his conversations with Socrates.⁹ He taught rhetoric; he also composed pleadings for such as had occasion for them, and is believed to have been the first that introduced that custom. His invention was warm and abundant, his style exact, his proofs strong, and he had a great felicity in answering unforeseen objections. He was no less successful in moving the passions, and in giving the persons he introduced speaking their just and peculiar characters. He was condemned to die for having favoured the establishment of the Four Hundred at Athens.

ANDOCIDES.

Andocides was also the cotemporary of Socrates. He began to flourish twenty years before Lysias.¹⁰ He was brought to a trial as an ac-

1 Hæc metas prima Athenis oratorem prope perfectum tulit. *Cic. in Brut.* n. 43.

2 Ante Periclem—litera nulla est, quæ quidem oratum aliquem habeat, et oratoris esse videatur. *Ibid.* n. 27.

3 In Phædro Platoni [page 270.] hoc Periclem præstissime ceteris dicit oratoribus Socrates, quod is Anaxagoræ Physici fuerit auditor; à quo censet eum, cum alia præclara quedam et magnifica didicisset, uberem et fecundum fuisse, gnarumque (quod est eloquentiæ maximum) quibus orationis modis quæque animorum partes pellerentur. *Cic. in Orat.* n. 15.

4 Hujus suavitatem maximè ex hilaratæ sunt Athenæ, hujus ubertatem et copiam admiratæ; ejusdem vim dicendi terroremque timuerunt. *In Brut.* n. 44.

5 Quid Pericles? de ejus dicendi copia sic accepimus, ut, cum contra voluntatem Atheniensium loqueretur pro salute patriæ, severius tamen id ipsum, quod ille contra populares hominis diceret, populare omnibus et jucundum videretur. Cujus in labris veteres comici, etiam cum illi maledicerent (quod tum Athenis fieri liceret) leporem balphasæ dixerunt; tantamque in eo vim fuisse, ut in eorum mentibus qui audierant quasi aculeos quosdam relinqueret. *De Orat.* l. iii. n. 139.

6 Ab Aristophane poëta fulgurare, tonare, permiscere Græciam dictus est. *Orat.* n. 29.

⁷ Ἥρασι, ἰσθίονα, ζυγίαινα τὸν Ἑλλάδα.

7 Itaque hic doctrina, consilio, eloquentia excellens, quadraginta annos præfuit Athenis, et urbanis eodem tempore et bellicis rebus. *Ibid.*

8 Pericles primus adhibuit doctrinam, &c. *In Brut.* n. 44.

9 Plut. de vit. decem Rhet.

10 Plut.

complice in throwing down the statues of Mercury, which were all either thrown down or mutilated in one night in the beginning of the Peloponnesian war. He could extricate himself from this danger only by promising to discover the guilty, in which number he included his own father, whose life however he saved. His style was simple, and almost entirely void of figures and ornaments.

LYSIAS.

Lysias was by origin of Syracuse, but born at Athens.¹¹ At fifteen years of age, he went to Thurium in Italy with two of his brothers in the new colony sent thither to settle. He continued there till the defeat of the Athenians before Syracuse, and then returned to Athens in the forty-eighth year of his age. He distinguished himself there by his peculiar merit, and was always considered as one of the most excellent of the Greek orators, but in the simple and tranquil species of eloquence. Perspicuity, purity, sweetness, and delicacy of style, were his particular attributes. He was, says Cicero, a writer of great subtilty and elegance, in whom Athens might almost boast already of a perfect orator.¹² Quintilian gives us the same idea of him. Lysias, says he, is subtle and elegant, and if it sufficed for an orator to instruct, none were more perfect than he.¹³ For he has nothing superfluous, nothing affected in his discourse. His style however resembles more a small and clear stream than a great river.

If Lysias generally confined himself to that simplicity, and as Cicero calls it, leanness of style,¹⁴ it was not because he was absolutely incapable of force and greatness: for according to the same Cicero, there were very strong and nervous passages in his harangues. He wrote in that manner through choice and judgment.¹⁵ He did not plead at the bar himself, but composed pleadings for others; and to suit their character,

was often obliged to use a simple style with little or no elevation; without which those native graces which were admirable in him had been lost, and he had betrayed the secret himself. It was therefore necessary that his discourses, which he did not pronounce himself, should have a natural and negligent air, that requires great art, and is one of the most refined secrets of composition. In this manner the law for accused persons to plead their own causes without the help of advocates was eluded.

When Socrates was summoned before the judges to answer for his opinions concerning religion, Lysias, brought him a speech, which he had composed with great care, and in which he had undoubtedly introduced whatever was capable of moving the judges.¹⁶ Socrates, after having read it, told him, that he thought it very fine and oratorical, but not consistent with the resolution and fortitude that became a philosopher.¹⁷

Dionysius of Halicarnassus describes at large, and with much taste and judgment, the character of Lysias's style, of which he enumerates the constituent parts, that are all of the simple and natural kind of eloquence I have spoken of. He even repeats some passages in one of his harangues, the better to make known his style.

ISOCRATES.

Isocrates was the son of Theodorus the Athenian, who having enriched himself by making musical instruments, was in a condition to give his children a good education: for he had two more sons and one daughter. Isocrates came into the world about the 86th Olympiad, A. M. 3568, Ant. J. C. 436, twenty-two years after Lysias, and seven before Plato. He had an excellent education under Prodicus, Gorgias, Tisias, and, according to some, Theramenes, that is to say, all the most famous rhetoricians of these times. His inclination would have led him to follow the usual course of the young Athenians, and to have shared in the public affairs: but the weakness of his voice, and his almost insurmountable timidity, not permitting him to venture appearing in public, he directed his views a different way. He did not however entirely renounce either the glory of eloquence, or the desire of rendering himself useful to the public, which were his ruling passions; and what the natural impediment of his voice denied him, he conceived thoughts of attaining by the help of his industry and pen. Accordingly he applied himself diligently to composition, and did not, like the generality of the sophists, make

11 Dionys. Halic. in Lysia.

12 Fuit Lysias — egregie subtilis atque elegans, quem jam prope audeas oratorem perfectum dicere. Cic. in Brut. ii. 35.

13 Lysias subtilis atque elegans, et quo nihil, si oratori satis sit docere, queras perfectius. Nihil enim est inane, nihil accersitum: puro tamen fonti, quam magno flumini, propior. Quintil. l. x. c. 1.

14 In Lysia sunt sæpe etiam lacerti, sic ut nihil fieri possit valentius: verum est certe genero toto strigosior. Brut. n. 64.

15 Illud in Lysia dicendi textum tenuæ atque rarum lætioribus numeris corrumpendum non erat. Perdideret enim gratiam, quæ in eo maxima est, simplicis atque inaffectedi coloris: perdideret fidem quoque. Nam scribebat aliis, non ipse dicebat: ut oportuerit esse illa rudibus et incompositis similia, quod ipsum compositio est. Quintil. l. ix. c. 4.

16 Lib. i. de Orat. n. 231.

17 Illam orationem discertam sibi et oratoriam videri, fortem et virilem non videri.

chimerical and useless questions, or subjects of mere curiosity, the objects of his application, but solid and important topics of government, which might be of use to states, and even princes as well as private persons, and at the same time do honour to himself by the graces he should endeavour to diffuse throughout his writings. Isocrates himself informs us in the exordium of his discourse, that these were his views.¹ He exercised himself also in composing pleadings for such as had occasion for them, according to the custom general enough in these times, though contrary to the laws, which, as I have observed before, ordained that persons should defend themselves without using the help of others. But as these pleadings drew trouble upon himself in consequence of the violation of the law, and obliged him to appear often before the judges, he renounced them entirely, and opened a school for the instruction of youth in eloquence.

By this new application, the house of Isocrates became in respect to Greece in general, a fruitful nursery of great men, and, like the Trojan horse, none came out of it but illustrious persons.² Though he did not appear in public at the bar, and confined himself within the walls of his school or study, he acquired a reputation to which none after him could attain, and was equally esteemed for the excellence of his compositions, and his art of teaching, as his writings and pupils sufficiently proved. He had a wonderful capacity in discerning the force, genius, and character of his scholars, and in knowing how to exercise and direct their talents: a rare, but absolutely necessary quality³ for succeeding in the important employment of instruction. Isocrates, in speaking of two of his most illustrious disciples, used to say, that in regard to Ephorus he used the spur, and to Theopompus the bridle, in order to quicken the slowness of the one, and check the too great vivacity of the

other. The latter, in composing, gave a loose to his fire and imagination, and exhausted himself in bold and glowing expressions: him he curbed. The other, on the contrary, who was timid and reserved, regarded nothing but a rigid correctness, and never dared to venture the least excursion: to him he recommended soaring, and the flights of imagination. His design was not to make them like each other: but by retrenching from the one, and adding to the other, to conduct each to the highest point of perfection of which his genius was susceptible.

Isocrates's school was of great use to the public, and at the same time of great gain to himself.⁴ He acquired more money in it than any sophist had ever done before him. He had generally more than an hundred scholars at five hundred drachmas (about twenty-five pounds) each, in all probability for the whole time of their studying under him. For the honour of so great a master, I should be sorry if what is said of him in respect to Demosthenes were true, that he would not instruct him because he was not able to pay the usual price. I choose rather to hold what Plutarch tells us in the same place, that Isocrates took nothing of the citizens of Athens, and only of strangers. So generous and disinterested a conduct suits much better with his character, and the excellent principles of morality diffused throughout all his works.

Besides his income from his school, he received great presents from considerable persons. Niccles king of Cyprus, and son of Evagoras, gave him twenty talents (about five thousand pounds) for the discourse inscribed with his name.

A very sensible saying of Isocrates is related.⁵ He was at table with Niccreon king of Cyprus, and was pressed to talk, and supply matter for conversation. He persisted in excusing himself, and gave this reason for his refusal: "What I do know, does not suit this place; and what would suit it, I do not know." This thought is very like that of Seneca: "I never desired to please the people: for they do not approve what I know, and I do not know what they approve."⁶

Isocrates upon the news of the defeat of the Athenians by Philip at the battle of Chæronea, could not survive the misfortune of his country, and died of grief, after having continued four days without eating.⁷ He was then fourscore and eighteen, or an hundred years old.

It is hard to describe the style of Isocrates better than Cicero and Quintilian have done it: I shall cite their own words. Cicero, after

¹ In Panathen.

² Extitit igitur Isocrates—(cujus domus cunctæ Græciæ quasi ludus quidam patuit atque officina dicendi) magnus orator et perfectus magister, quamquam forensi luce caruit, intraque parietes aluit eam gloriam, quam nemo quidem, meo judicio, est postea consecutus. *Cic. in Brut.* n. 32.

³ Ex Isocrates ludo, tanquam ex equo Trojano, innumeri principes extiterunt. *Lib. II. de Orat.* n. 94.

⁴ Clarissimus ille præceptor Isocrates, quem non magis libri bene dixisse, quam discipuli bene docuisse testantur. *Quintil.* l. II. c. 9.

⁵ Diligentissime hoc eis, qui instituunt aliquos atque erudiunt, videndum, quò sua quemque natura maxime ferre videatur.—Dicobat Isocrates, doctor singularis, se calcaribus in Ephoro, contra autem in Theopompo frenis uti solere. Alterum enim exultantem verborum audacia reprimebat, alterum cunctantem et quasi verecundantem incitabat. Neque eos similes effecit inter se, sed tantum alteri affinxit, de altero limavit, ut id conformaret in utroque, quod utriusque natura pateretur. *Lib. III. de Orat.* n. 38.

⁴ Plut. de decem Orat. Gr. in Isocr.

⁵ Plut. *Ibid.*

⁶ Nunquam volui populo placere: nam, quæ ego scio, non probat; quæ probat populus, ego nescio. *Senec. Ep.* 22.

⁷ *Ibid.*

having related the favourable idea which Socrates had conceived of Isocrates while very young, and Plato's magnificent praise of him when very old, though he seems the declared enemy of the rhetoricians, goes on thus describing his style. "Dulce igitur orationis genus, et solutum, et effluens, sententiis argutum, verbis sonans, est in illo epideictico genere, quod diximus proprium Sophistarum, pompæ quam pugne aptius, gymnasiis et palestræ dicatum, spretum et pulsum foro." "This kind of eloquence is smooth, agreeable, flowing, and abounds with fine thoughts and harmonious expressions: but it has been excluded the bar, and transferred to the academies, as more proper for preparatory exercises, than real affairs." The following is Quintilian's picture of it, and seems to have been copied from the former. "Isocrates in diverso genere dicendi [he had just before spoke of Lysias] nitidus et comptus, et palestræ quam pugne magis accommodatus, omnes dicendi veneres secutus est. Nec immerito, auditoriis enim se, non judiciis comparat: in inventione facilis, honesti studiosus, in compositione adeo diligens, ut cura ejus reprehendatur."

Lysias and Isocrates resembled each other very much in many points, as Dionysius Halicarnassensis shows at large: but the style of the latter is more smooth, flowing, elegant, florid, and adorned; his thoughts are more lively and delicate, with a disposition of words extremely laboured, and perhaps to excess. In a word, all the beauties and graces of eloquence, used by the sophists in the demonstrative kind, are displayed in his discourses, not designed for action and the bar, but pomp and ostentation.

Cicero in many parts of his books *de Republica*, strongly insists that Isocrates was, properly speaking, the first that introduced into the Greek tongue, number, sweetness, and harmony, which before him were little known, and almost generally neglected.

It remains for me to explain one more quality of Isocrates, his love of virtue and good in general, which Quintilian expresses, *honesti studiosus*, and which, according to Dionysius Halicarnassensis, infinitely exalts him above all the other orators. He runs over his principal discourses to show, that they have no other tendency but to inspire states, princes, and even private persons, with sentiments of probity, honour, fidelity, moderation, justice, love of the public good, zeal for the preservation of liberty, and respect for the sanctity of oaths, the faith of treaties, and for all that relates in any manner to religion. He advises all those, who have the government of states, and the administration of public affairs, confided to their care,

to read and study these admirable books with singular attention, which contain all the principles of true and salutary policy.

ISÆUS.

Isæus was of Chalcis in Eubœa. He went to Athens,¹⁰ and was the pupil of Lysias, whose style he imitated so well, that in reading their discourses it was hard to distinguish the one from the other. He began to appear with splendour after the Peloponnesian war, and lived to the time of Philip. He was Demosthenes's master, who gave him the preference to Isocrates, because the eloquence of Isæus was stronger, and more vehement than the other's, and for that reason suited better the warm and vigorous genius of Demosthenes.¹¹

LYCURGUS.

Lycurgus was highly esteemed at Athens for his eloquence, and still more for his probity. Several important employments were conferred upon him, in which he always acquitted himself with success. The civil government of Athens was confided to his care, during which he made so severe a war upon malefactors, that he obliged them all to quit the city. He passed for a severe and inexorable judge, to which Cicero alludes in his letter to his friend Atticus: *Nosmetipsi, qui Lycurget à principio fuissetus, quotidie demitigamur.*¹²

Lycurgus was appointed questor, or receiver general of the revenues of the commonwealth, at three different times, and exercised that function during fifteen years. In that time fourteen thousand talents (about two millions sterling) passed through his hands, of which he gave an exact account. Before him the revenues of the city amounted only to sixty talents, and he augmented them to twelve hundred, (about three hundred thousand pounds.)¹³ It was this questor, who seeing one of the farmers of the revenue carrying the philosopher Xenocrates to prison, because he had not paid a certain tribute as a stranger at the time, took him from the officers, and made them carry the farmer thither in his stead, for having had the insolence and cruelty to treat a man of learning in that manner. That action was universally applauded. Lycurgus was one of the orators demanded by Alexander of the Athenians, to which they could not consent.

¹⁰ Plut. in Isoc. ¹¹ Isæo torrentior. *Juvén.*

¹² Ad. Attic. Ep. xiii. l. 1.

¹³ This would be a very small revenue for such a city as Athens, and the augmentation surprisingly considerable: wherefore I do not know whether *ἱξαστοῖς*, six hundred, may not be read, instead of *ἱξένοντος*, sixty.

ÆSCHINES. DEMOSTHENES.

I have related at large elsewhere¹ the history of these two celebrated orators, who were always each other's rival, and whose disputes did not cease till the banishment of Æschines. I have also treated of their style and eloquence in the same place; and as I have nothing to add to what I have said in respect to them, I shall content myself here with setting before the reader their pictures as drawn by Quintilian.² "Sequitur oratorum ingens manus, cum decem simul Athenis ætas una tulerit; quorum longè princeps Demosthenes, ac penè lex orandi fuit: tanta vis in eo, tam densa omnia, ita quibusdam nervis intenta sunt,³ tam nihil otiosum, is dicendi modus, ut nec quid desit in eo, nec quid redundet, invenias. Plenior Æschines, et magis fusus, et grandiori similis, quo minùs strictus est; carnis tamen plus habet, lacertorum minus." "An infinite number of orators follow, for Athens had ten at one and the same time; at the head of these was Demosthenes, who far surpassed them all, and who deserves to be considered almost as the rule and standard of eloquence. His style is so strong, his sense so close and so impressive, and every thing so just, so proper and exact, that nothing can be added or retrenched from him. Æschines is more abundant and diffuse. He seems greater, because more loose, and less collected in himself; he has, however, only more flesh with less nerves."

HYPERIDES.

Hyperides had been at first the hearer and disciple of Plato. He afterwards applied himself to the bar, where his eloquence was admired.⁴ His style had much sweetness and delicacy, but was fit only for small causes.⁵ He was joined with Lycurgus in the administration of the public affairs, when Alexander attacked the Greeks, and always declared openly against that prince. After the loss of the battle of Cranon, the Athenians being upon the point of delivering him up to Antipater, he fled to Ægina, and thence took refuge in a temple of Neptune, whence he was taken by force, and carried to Antipater at Corinth, who put him to the most cruel tortures, in order to draw from him some secrets and discoveries he wanted to know.

¹ See Rollin's Ancient History, vol. li. p. 56, &c.

² Lib. x. c. l.

³ The metaphor here is not taken from the nerves of the body, but the strings of a bow, which, being drawn to the utmost, discharge the arrows with extraordinary force and impetuosity.

⁴ Plut. in Hyper.

⁵ Dulcis imprimis et acutus Hyperides: sed minoribus causis, ut non dixerim utilior, magis par. *Quintil.* l. i. c. l.

But, lest the violence of the pain should force him to betray his friends and country, he bit off his tongue with his teeth, and expired in the torments.

DINARCHUS.

Dinarchus, according to some, was a native of Corinth, and came to settle at Athens when Alexander was pursuing his conquests in Asia.⁶ He was the disciple of Theophrastus, who had succeeded Aristotle in his school, and contracted a particular intimacy with Demetrius Phalereus. He did not plead himself, but composed pleadings for those who had occasion for them. He made Hyperides his model, or rather, according to others, Demosthenes, whose animated and vehement style suited his genius better.

Change of Eloquence among the Greeks.

The space of time between Pericles and Demetrius Phalereus, of whom we are going to speak, was the golden age of eloquence among the Greeks; and included about an hundred and thirty years. Before Pericles, Greece had produced abundance of great men for government, policy, and war; besides numbers of excellent philosophers: but eloquence was very little known there. It was he, as I have already observed, who first placed it in honour, who demonstrated its force and power, and introduced the taste for it. This taste was not common to all Greece. Is there any mention in those times of any Argive, Corinthian, or Theban orator? It confined itself to Athens, that in the interval of which I am speaking, produced the great number of illustrious orators, whose merit has done it so much honour, and has rendered its reputation immortal. All that time may be called the reign of solid and true eloquence, which neither knows nor admits of any other ornament, but natural beauty without paint. "Hæc ætas effudit hanc copiam; et, ut opinio mea fert, succus ille et sanguis incorruptus usque ad hanc ætatem oratorum fuit, in quo naturalis inesset non fucatus nitor."

As long as Greece proposed to herself these great orators for models, and imitated them with fidelity, the taste for sound eloquence, that is, the manly and the solid, subsisted in all its purity. But, after their deaths, when she began insensibly to lose sight of them, and to follow different tracks, an eloquence of a new kind, more set off and embellished, succeeded the ancient, and soon made it disappear. Demetrius Phalereus occasioned this change; of whom it remains for me to speak.

⁶ Plut. in Dinar.

⁷ Brut. n. 36.

DEMETRIUS PHALEREUS.

Demetrius was surnamed *Phalereus* from Phalera, one of the ports of Athens, where he was born. The celebrated Theophrastus was his master.

I shall not repeat his history in this place, which is related with sufficient extent elsewhere.* The reader may see there, that Cassander, having made himself master of Athens some time after the death of Alexander the Great, confided the government of it to Demetrius, who retained it ten years, and acted with so much wisdom, that the people erected three hundred and sixty statues in honour of him: in what manner they were afterwards thrown down, and he himself obliged to retire into Egypt, where Ptolemy Soter received him with great kindness: and lastly, his imprisonment in the reign of Ptolemy Philadelphus, where he died by the bite of an asp.

I consider Demetrius Phalereus here only as an orator, and am to show in what manner he contributed to the decline and destruction of eloquence at Athens.

I have already said that he had been the disciple of Theophrastus, so called from his excellent and *divine manner of speaking*. He had acquired under him a florid and elegant style, abounding with ornaments, and had exercised himself in that kind of eloquence, which is called the *temperate* or *mediate*, which keeps the mean betwixt the sublime and simple; admits all the ornaments of art; employs the shining graces of elocution, and the glitter of thoughts; in a word, which abounds with the sweet and agreeable, but is void of force and energy, and with all its glow and embellishment rises no higher than mediocrity. Demetrius excelled in this manner of writing, which is highly capable of pleasing and exciting admiration of itself, if not compared with the sublime kind, the solid and majestic beauty of which makes the faint lustre of its slight and superficial charms appear like nothing. It was easy to perceive from his flowing, sweet, agreeable style, that he had been the scholar of Theophrastus.† His shining expressions, and happy metaphors, says Cicero, were a kind of stars, that glittered in his discourse, and made it luminous.

The mind is generally apt enough to be dazzled by this kind of eloquence, which deceives the judgment by pleasing the imagination. And

this happened now at Athens, where Demetrius¹⁰ was the first who struck at the ancient solid taste, and began the corruption of eloquence. His sole view in speaking to the people was to please them. He was for showing the mildness and benevolence of his disposition, which indeed was his character: but the smooth terms and accent in which he conveyed it, tickled the ears of his auditors without going farther, and only left behind it a pleasing remembrance of a sweet and harmonious disposition of studied words and thoughts. It was not like the victorious eloquence of Pericles, which, whilst it abounded with charms, was armed with thunders and lightning, and left in the mind of the hearer, not only a sense of pleasure and delight, but a lively impression, a kind of resistless impulse, that reached and engrossed the heart.

This showy eloquence may sometimes be applicable on occasions of pomp and splendour, in which no other ends are proposed, but to please the auditors, and to display wit, as in the case of panegyrics, provided, however, that wise restrictions be observed, and the liberty allowed to this kind of discourse be kept within just bounds. Perhaps also this species of eloquence would have been less dangerous, if it had been confined to the private assemblies of the rhetoricians and sophists, who admitted only an inconsiderable number of hearers. But that of Demetrius had a far more ample theatre. It appeared before the whole people; so that his manner of speaking, if applauded, as it always was, became the rule of the public taste. No other language was heard at the bar; and the schools of rhetoric were obliged to conform to it. All declamations, which were their principal exercise, and of which the invention is ascribed to our Demetrius, were formed upon the same plan. In proposing his style to themselves, they did not keep within the bounds he had observed: for he was excellent in parts, and merited praise in many things. But as for them, elocution, thoughts, figures, every thing, as is usual was strained, and carried to excess. This bad taste made its way with rapidity into the provinces, where it still grew much more corrupt. As soon as eloquence had quitted the Piræus in this condition, and dispersed itself into the islands, and over Asia, it lost that Attic health and vigour it had preserved so long at home, assumed the manners of strangers

* See the Ancient History, vol. ii. p. 248, &c.

† Orator parum vehemens, dulcis tamen, ut Theophrasti discipulum agnosceres. *Offic.* l. i. n. 3.

Cujus oratio cum sedatè placidèque loquiritur, tum illustant eam quasi stellæ quedam tralata verba atque immutata. *Orat.* n. 92.

10 Hic primus inflexit orationem, et eam mollem tene-ramque reddidit: et suavis, sicut fuit, videri maluit quàm gravis: sed suavitæ ea, qua perfunderet animos, non qua perfringeret; et tantùm ut memoriam concinnitatis suæ, non (quemadmodum de Pericle scripsit Eupolis) cum delectatione aculeos etiam relinqueret in animis eorum, à quibus esset auditus. *Brut.* n. 38.

and almost unlearned to speak; ¹ so great and precipitate was its decline. We have this description of it from Cicero.

The ruin of liberty at Athens partly conduced to hasten that of eloquence. The great men, who had done it so much honour by the talent of speaking, appeared there no more. Only some rhetoricians and sophists, dispersed in the several parts of Greece and Asia, supported in some small degree its ancient reputation. I have spoken of them elsewhere.

But, what is most surprising, some ages after, eloquence resumed new force, and appeared again with almost as much splendour as of old at Athens. It is plain that I mean those happy times in which the Greek fathers made so laudable and holy a use of this talent. For I am not afraid to compare St. Basil, St. Gregory Nazianzen, St. Chrysostom, and some others, with the most celebrated orators of Athens. I have inserted several extracts from them in the second volume of the treatise upon study, especially from St. Chrysostom, which in my opinion are not inferior to the orations of Demosthenes, either in beauty of style, solidity of argument, greatness of matter, or force and vehemence of passions. The reader may consult these passages, which renders unnecessary my giving new proofs of what I advance here; and I believe he will agree with me, that there is nothing finer or more eloquent to be found in all the writings of ancient Greece.

We shall soon see that the Latin eloquence had not the same good fortune. As soon as it began to decline, after having shone out with extraordinary lustre for some years, it continually languished, and sunk by degrees sufficiently rapid, till it fell at last into a state of corruption, from which it has never since raised itself. And this is what I am to show in the following article.

ARTICLE II.

OF THE LATIN ORATORS.

Rome, intent at first upon strengthening herself in her new establishment, then upon extending her dominions continually around her, and afterwards on pushing her conquests into remote regions, devoted her whole care and application for many ages to military exercises, and continued during all that time without taste for the arts and sciences, in general, and in

particular for eloquence, of which she had hitherto scarce any idea. It was not till after she had subjected the most powerful nations, and established herself in peace and tranquillity, that her commerce with the Greeks began to reform her grossness and kind of barbarity in respect to the exercises of the mind. ² The Roman youth, who seemed then to awake out of a profound sleep, became sensible of a new species of glory unknown to their ancestors, and began to open their eyes, and conceive a taste for eloquence.

In order to give some idea of the beginning, progress, perfection, and decline of eloquence, I shall divide the Roman orators into four ages; but shall expatiate only upon such of them as are most known either by their works or reputation.

SECT. I.

First Age of the Roman Orators.

The Romans, in the arms of peace, the friend of science, and mother of leisure, made at first some efforts for the attainment of eloquence. But as they were entirely ignorant of the means necessary to use for acquiring it, and had no other guide but their own reason and reflections, they made but little progress. ³ It was necessary to call in conquered Greece to the aid of her victors. As soon as the Grecian rhetoricians had been heard at Rome, had taught there, and their books began to be read, the Roman youth conceived an incredible ardour for eloquence. We have seen elsewhere ⁴ what difficulties it met with on its first entrance into Rome, and what obstacles it had to surmount in establishing itself there. But it is of the nature of eloquence to conquer opposition, and to force the barriers laid in its way. It succeeded at Rome, notwithstanding the endeavours of Cato, who, though a great orator himself, was against the people's devoting themselves too much to the arts of Greece; and in a short time became the reigning study there. The greatest men afterwards, as Scipio and Lælius, had always learned Greeks about them, from whom they made it their glory to receive lessons. ⁵

² Postea quàm imperio omnium gentium constituto, diuturnitas pacis otium confirmavit, nemo fere laudis cupidus adolescens non sibi ad dicendum studio omni enitendum putavit. *Lib. i. de Orat.* n. 14.

³ Ac primò quidem totius rationis ignari, qui neque exercitationis ullam viam, neque aliquod præceptum artis esse arbitrantur, tantum, quantum ingenio et cogitatione poterant, consequuntur. Post autem, auditibus oratoribus Græciæ, cognitisque eorum literis, adhibitisque doctoribus, incredibili quodam nostri homines dicendi studio flagraverrunt. *Lib. i. de Orat.* n. 14.

⁴ Ancient History, vol. ii.

⁵ *Lib. ii. de Orat.* n. 155.

¹ Ut semel à Piræo eloquentia erecta est, omnes peregravit insulas, atque ita peregrinata tota Asia est, ut se externis oblineret moribus, omnemque illam salubritatem Atticæ dictionis quasi sanitatem perderet, ac loqui pene dediceret. *Brut.* n. 51.

To proceed to the orators of the first age, the most known are Cato the Censor, the Gracchi, Scipio Æmilianus, and Lælius. They had excellent natural parts, a wonderful fund of wit, great order in their discourse, force in their proofs, solidity in their thoughts, and energy: but neither art, delicacy, grace, care in the arrangement of words, nor knowledge of the numbers and harmony of speech.

Cato had composed an infinite number of orations.⁶ More than an hundred and fifty of them were extant in Cicero's time: but they were not read. He affirms, however, that his eloquence wants only those lively figures, and glowing colours, which were not known in his time.⁷

The Gracchi distinguished themselves also by an eloquence manly and vigorous, but void of ornaments. Cicero has preserved⁸ some lines of a discourse spoke by young Gracchus after his brother's death, which are very lively and pathetic, and which he has imitated himself in the peroration of his defence of Murena. "Quò me miser conferam? quò vertam? In capitulumne? at fratris sanguine redundat. An domum? matremne ut miseram lamentantemque videam, et abjectam?" "Where shall I go, whither shall I turn myself, miserable as I am? Shall it be to the capitol? but that still reeks with my brother's blood. Shall I go home? what, to behold my mother's sorrow, to hear her mourn, and see her lying inconsolable on the ground?" If the rest of his discourse resembled these few lines, it did not give place in any thing to those of Cicero. In pronouncing them, every thing spoke in him, his eyes, voice, gesture; so that his enemies themselves could not refrain from tears.⁹ Aulus Gellius¹⁰ has preserved two fragments of the discourse of C. Gracchus, which are not of the same taste with that cited by Cicero. They are elegant, but cold, though the subject is weighty and affecting. It was the same Gracchus who had always a slave behind him with a flute, to give him notice when to raise or lower his voice.

Quintilian frequently opposes the style of the age we speak of to that of his own times, and gives us an excellent precept on that head. "Youth," says he, "have two great faults to shun. The first would be, if, upon the recommendation of any excessive admirer of the ancients, they should study and imitate the orations

of Cato, the Gracchi, and the like authors; for that would render their style stiff, dry, and rugged. The opposite fault is, their being charmed with the glittering prettiness, the finery of the soft effeminate style now in fashion, and spoiling their taste by a fondness for a gaudy luscious kind of eloquence, the more dangerous for them, as the more grateful to their age and character. But when their judgment is formed, and they are safe on that side, I would advise them," continues he, "to read the ancients, whose strong and manly eloquence, when separated from the rudeness and inelegance of the gross age in which they lived, will sustain, and even exalt, the beauties and ornaments of ours. I would also exhort them to study the moderns attentively, who are excellent in parts, and may be of great use to them."¹¹

I thought this passage of Quintilian proper in this place for explaining the style of the times in question: besides which, it includes very judicious advice, that the youth of the present age may also apply to their advantage.

I shall not enter into the character of the eloquence of Scipio and Lælius; and assure myself, that, though it savoured of the age they lived in, it was far from the roughness of Cato's and the Gracchi. I shall only relate here a fact highly for the honour of Lælius, and which shows how far he carried his candour and integrity. He had taken upon him the care of a very important cause, and pled it with abundance of eloquence.¹² The judges however did not think his arguments sufficed to determine their sentence, and referred it to another hearing. Lælius laboured it anew, and pled it a second time, but with the same success as before. Upon which, without farther delay, he obliged his clients to put their cause into the hands of Galba, a famous orator of those times, who was more vehement and pathetic than him. It was not without great difficulty, that he was prevailed upon to undertake it; however he carried it unanimously by his first pleading. "It was then, as in all other things, the better and more humane custom," says Cicero, "to be easy in doing justice to the merit of others, though at one's own expense." "Erat omnino tum mos, ut in reliquis rebus

⁶ Cic. in Brut. n. 65.

⁷ Intelligens nihil illius lineamentis nisi eorum pigmentorum, quæ inventa nondum erant, florem et colorem defuisse. Brut. n. 298.

⁸ Lib. iii. de Orat. n. 215.

⁹ Quæ sic ab illo acta esse constabat, oculis, voce, gestu, inimici ut lacrymas tenere non possent. Brut. n. 298.

¹⁰ Lib. x. c. 3.

¹¹ Duo genera maximè cavenda pueris puto. Unum, ne quis eos antiquitatis nimius admirator in Græchorum Catonisque, et aliorum similium lectione durescere velit; sient enim horridi et jejuni. — Alterum quod huic diversum est, ne recentis hujus lascivie flosculis capti, voluptate quadam prava deliniantur, ut produlce illud genus, et puerilibus ingeniis hoc gratius, quo proplius est, adament. Firmis autem judiciis, jamque extra periculum positis, suaserim et antiquos legere, ex quibus si assumatur solida ac virilis ingenii vis, deterso rudis seculi squalore, tum noster hic cultus claris enitescet; et novos, quibus et ipsis multa virtus adest. Quintil. l. ii. c. 6.

¹² Brut. n. 65—88.

melior, sic in hoc ipso humanior : ut faciles essent in suum cuique tribuendo."

SECT. II.

Second Age of the Roman Orators.

I shall place four orators in this second age : Antony and Crassus, more advanced in years ; and Cotta and Sulpitius, younger men. They are hardly known by any thing but what Cicero tells us of them in his books of rhetoric. He observes, it was under the two first that the Roman eloquence, having attained a kind of maturity, began to be capable of entering the lists with that of the Greeks.¹

Antony,² in his voyage to Cilicia, whither he went proconsul, stopped for some time at Athens and in the Island of Rhodes upon different pretexts, but in reality for the opportunity of conversing with the most able rhetoricians, and in order to improve himself in eloquence by their instructions. He however always affected from that time to appear ignorant of what the Greeks taught respecting the art of speaking, with the view of rendering his eloquence thereby the less suspected.³ And he accordingly was generally supposed by his hearers to come to the bar, and to plead his causes, almost without preparation.⁴ But, in reality, he was so well prepared, that the judges were often not enough so in their distrust of him. Nothing for the success of his cause escaped him. He knew how to dispose every proof in the place, where it made most impression. He was less attentive to the delicacy and elegance of his terms, than to their force and energy. He seemed to regard only things in themselves, and right reason : in a word, he had all the great qualities of an orator, and supported them wonderfully by the force and dignity of his utterance.

In the second book of the Orator⁵ he traces the plan himself of an oration which he pronounced in defence of Norbanus, who was justly prosecuted as the author of a sedition : a cause, as it is easy to conceive, of a very tender and difficult nature. He treated it with such art, force, and eloquence, as wrested the criminal

from the severity of the judges : and he confesses himself, that he carried his cause less by the strength of reason, than the vehemence of the passions he knew how to introduce with judgment. *Ita magis affectis animis Judicium, quam doctis, tua, Sulpiti, est à nobis tum accusatio rica.* Sulpitius, the advocate on the other side, had notwithstanding left the judges perfectly convinced of the justice of his cause, and highly incensed against Norbanus : *Cum tibi ego, non iudicium, sed incendium tradidissem.* Nothing is more capable of forming young pleaders than the plan of this harangue : but they ought not to imitate the use Antony made at that time of his talents for saving a criminal from the punishment he deserved.

Crassus was the only orator that could be ranked with Antony, and some give him the preference to the other.⁶ He was but three years younger than him. His peculiar character was an air of gravity and dignity, which he knew how to temper with an insinuating politeness, and even refined pleasantry and railery, that never forgot the decency of the orator.⁷ His language was pure and correct with elegance, but easy and void of affectation. He explained himself with wonderful clearness, and exalted the beauty of his discourse by the strength of his proofs, and agreeable allusions and similitudes.

When Crassus had to do with persons of merit and reputation, he took care to proceed with tenderness and reserve, and employed no railery in respect to them that could shock or offend : *in quo genere nulli aculei contumeliarum inerant* :—a moderation very extraordinary in those who value themselves upon pleasantry, and who find it very hard to keep in a smart saying when it comes uppermost, and which they think it for their honour to vent.⁸ But he behaved differently to such as gave room for it by their bad conduct. One Brutus, of whom I am going to speak, was of this number. He had taken up the business of an accuser for the sake of the rewards granted by the laws to such as convicted criminals : a calling which was looked upon at Rome as highly unworthy of a man of condition and probity, though a young man was approved there for making himself known by accusing some person of importance. This Brutus was universally scandalous as a prodigal who had squandered his estate in excesses and debauchery.

1 Quod ideo posui, ut dicendi Latine prima maturitas in qua etate existisset, posset animadverti. *Cic. in Brut. n. 101.*

Ego sic existimo—in his primùm cum Græcorum gloria Latine dicendi copiam æquatam. *Id. n. 138.*

2 Lib. I. de Orat. n. 8. Lib. II. de Orat. n. 3.

3 Ibid. n. 153.

4 Erat memoria summa, nulla meditationis suspicio. Imperatus semper aggredi ad dicendum videbatur : sed ita erat paratus, ut Iudices, illo dicente, nonnunquam viderentur non satis parati ad cavendum fuisse. *Brut. n. 139.*

5 Lib. II. de Orat. n. 107.—203.

6 Brut. n. 143.

7 Erat summa gravitas : erat cum gravitate junctis facetiarum et urbanitatis oratorius non scurrilis lepos. Latine loquendi accurata et sine molestia diligens elegantia, &c.

8 Quod est hominibus facetis et dicacibus difficillimum, habere hominum rationem et temporum, et ea, quæ occurrant, cum falsissime dici possunt, tenere. *2 de Orat. n. 221.*

Pleading one day against Crassus, he caused two speeches of that orator to be read, in which he had manifestly contradicted himself. Crassus was highly nettled, and knew well how to be even with him. For that purpose he caused three dialogues of Brutus's father to be read also, in each of which, according to a custom common enough, mention was made in the beginning of the country-house, where the conversation was supposed to be held. After having by this method introduced the names and reality, of three estates which his father had left him, he asked him with bitter reproaches what was become of them. An accidental circumstance gave Crassus occasion to treat him in the same cause with a quite different force and vivacity, and to unite the most severe invectives with railery.⁹ While they were pleading in the forum, where every body knows all great causes were tried, the funeral procession of a Roman lady passed by, at the head of which, according to the ceremonies practised on such occasions at Rome, the images of her ancestors were carried: she was of the family of the *Junii*, of which that of Brutus was a branch. Upon this unexpected sight, Crassus, as if transported with a sudden enthusiasm, fixing his eyes on Brutus, with the most animated voice and gesture: "Why do you sit, Brutus?" said he, "What news would you have this good old lady carry to your father, and to those great men, whose images you see borne before her? What shall she say of you to your ancestors, and particularly to Lucius Brutus, who delivered this people from the tyranny of kings? What shall she tell them you do? What business, what glory, what virtue shall she say you study? Is it to increase your patrimony? That would not suit your birth; besides your debauches have entirely eaten up that. Is it the civil law? Your father's

example might induce you to it; but of that you do not so much as know the most common principles. Is war your study? No you never saw a camp. Or eloquence? Of that too you know nothing: and as for the volubility of your tongue and the strength of your lungs, you devote them wholly in this place to the vile and execrable traffic of gain by calumnies. And do you dare to see the sun? To look the judges in the face, to appear at the bar, in the forum, the city, and in the sight of the people? Are you not struck with shame and horror at this procession, that deceased lady and those venerable images, whose glory you dishonour so much by your infamous practices?" A passage like this suffices to show us what we are to judge of the character and merit of Crassus's eloquence.

To this rare talent he added great knowledge of the civil law; in which however Scaevola far exceeded him. He was the most learned civilian, and one of the most celebrated orators of his time. They were both nearly of the same age,¹⁰ had passed through the same dignities, and applied themselves to the same functions and studies. This resemblance, and kind of equality, far from exciting the least thought of jealousy, as it often happens, and from making the least change whatsoever in their friendship, only served to improve and augment it.

I shall say only a few words of the two young orators, Cotta and Sulpitius, who at this time made a shining figure at the bar. The character of their eloquence was quite different.

Cotta's invention was penetrating and acute: his elocution pure and flowing.¹¹ As the weakness of his lungs obliged him to avoid all violent exertions of voice, he took care to adapt his style and manner of composing to the infirmity of his organs. Every thing in it was just, neat, and strong. But what was most admirable in him, as he could make no very great use of the vehement and impetuous style, and consequently could not influence the judges by the vigour of his discourse; he had however the address in treating his matter, to produce the same effect upon them by his calm and composed manner, as Sulpitius by his ardent and animated eloquence.

9 Quis est qui non fateatur, hoc lepore atque his facetiis non minus refutatum esse Brutum, quam illis tragædiis, quas egißent, cum casu in eadem causa cum funere efferretur anus Junia? Proh dii immortales! Quæ fuit illa, quanta vis, quam inexpectata, quam repentina! cum, conjectis oculis, gestu omni imminente, summa gravitate, et celeritate verborum: Brute, quid sedes? Quid illam animum patri nunciare vis tuo? Quid illis omnibus, quorum imagines duci vides? Quid Lucio Bruto, qui hunc populum dominatæ regio liberavit? Quid te facere? Cui rei, cui gloriæ, cui virtuti studere? Patrimonione augendo? At id non est nobilitatis. Sed fac esse. Nihil superest: libidines totum dissipaverunt. An juri civili? Est pater-num. Sed, &c.—An rei militari, qui nunquam castra videris? An eloquentiam, quæ nulla est in te, et quicquid est vocis ac lingue, omne in istum turpissimum calumniæ quæstum contulisti? Tu lucem aspicere audes? Tu hos intueri? Tu in foro, tu in urbe, tu in civium esse conspectu? Tu illam mortuam, tu imagines ipsas non perhorrescis: quibus non modo imitanda, sed ne collocandis quidem ubi nullum locum reliquisti? *L. li. de Orat. n. 223—226.*

10 Illud gaudeo, quod et æqualitas vestra, et pares honorum gradus, et artium studiorumque quasi finitima vicinitas, tantum abest ab obtruncatione invidiæ, quæ solet: lacerare periosque, uti es non modò non exulcerare vestram gratiam, sed etiam conciliare videatur. *Brut. n. 156.*

11 Inveniebatur igitur acutè Cotta, diebat purè ac solutè: et ut ad infirmitatem laterum persciter contentione omnem remiserat, sic ad virium imbecillitatem dicendi accommodabat genus. Nihil erat in ejus oratione nisi sincerum, nihil nisi siccum, atque sanum: illudque maximum, quod, cum contentione orationis flectere animos Judicum vix posset, nec omnino eo genere diceret, tractando tamen impellebat, ut idem facerent à se commoti, quod à Sulpitio concitati. *Brut. n. 202.*

The style of Sulpitius, on the contrary, was lofty, vehement,¹ and to use the expression, tragical. His voice was strong, sweet, and clear; the gesture and motion of his body extremely graceful and agreeable; but that grace of action suited the bar, not the stage. His discourse was rapid and abundant, but without any vicious redundancy or superfluity. Sulpitius made Crassus his model; Cotta was better pleased with Antony. But the latter had neither Antony's force, nor the former Crassus's pleasantry.

There was a remarkable difference between Cotta and Sulpitius. The latter was cut off in his youth, whereas Cotta lived to an advanced age, was consul, and pled with Hortensius, who was, however, much younger than he.

The example of Cotta and Sulpitius shows, that two orators may both be excellent without resembling each other; and that the important point is to discern aright, to what nature or genius inclines us, and to take her for our guide. These had the good fortune to find two great masters and most friendly guides in Antony and Crassus, who spared no pains, and made it their pleasure, to form them to eloquence.

SECT. III.

Third Age of the Roman Orators.

This is the golden age of Roman eloquence, which was of short duration, but shone out with great lustre, and almost equalled Rome with Athens. It produced a great number of excellent orators: Hortensius, Caesar, who would have been an orator of the first class, if he had kept to the bar, Brutus, Messala, and many others, who all acquired great reputation among the Romans, though their orations are not come down to us. But Cicero obscures the glory of all the rest, and may be considered as the most perfect model of Roman eloquence that ever appeared in the world. I must desire the reader's permission for referring him to the treatise upon study, where I have expatiated largely upon Cicero, and the character of his eloquence, of which, for that reason, there remains little for me to say.

He was indebted to nature for a happy genius, which his father took care to cultivate in a particular manner, under the direction of Crassus, who laid down the plan of his studies.² He

had the most able masters of those times at Rome, and went afterwards into Greece and Asia Minor, to learn the precepts of oratory at their source.

His brother Quintus believed that nature alone, with the aid of frequent exercise, sufficed to form the orator.³ Cicero was of a very different opinion, and was convinced, that the talent of speaking could only be acquired by a vast extent of erudition. Accordingly, persuaded that without the most tenacious application, and an ardour that rose almost to passion, nothing great could be attained, he devoted himself wholly to laborious study. The fruits of it soon appeared, and from his first showing himself at the bar, he was distinguished by universal applause.

He had a fertile, warm, and shining wit; a rich and lively imagination; a polished, florid, abundant, and luxuriant style; which last quality is no fault in a young orator. Every body knows that Cicero, when master of the art, in laying down rules is for having youth display fertility and abundance in their compositions: *Volo se effertat in adolescente fecunditas.*⁴ Quintilian⁵ often and strongly recommends to masters, not to expect or require finished and perfect discourses from their disciples. He prefers a bold freedom in their exercises, which grows wanton while it makes efforts, and exceeds the bounds of the exact and the just. It is easy to correct abundance, but there is no curing sterility. Cicero himself cites⁶ an example of this luxuriant and too florid style from his own defence of Roscius Amerinus, who was accused of parricide. In a great commonplace upon parricide, after having described the punishment established by the Roman laws for such as were convicted of it, which was to sow them up in a leathern bag, with a dog, a cock, a serpent, and an ape, and to throw them into the sea, he adds the following reflection, to show the enormity of the crime by the singularity of the punishment, the choice of which seems to have had in view the excluding of an ungrateful wretch from the use of all nature, who had been so unnatural as to deprive his father of life. "*Quid est tam commune quam spiritus vivis,*

³ Soles nonnunquam hac de re à me in disputationibus nostris dissentire, quod ego eruditissimorum hominum artibus eloquentiam contineri statuum; tu autem illam ab elegantia doctrinæ segregandam putes, et in quodam ingenii atque exercitationis genere ponendam. *Líb. i. de Orat.* c. 5.

⁴ *Líb. ii. de Orat.* n. 68.

⁵ In pueris oratio perfecta nec exigi nec sperari potest: melior autem est indoles læta generosique conatus, et vel plura concipiens interim spiritus. Facile remedium est ubertatis: steriliti nullo labore vincuntur. *Quintil.* l. ii. c. 4.

⁶ *In Orat.* n. 107, 108.

¹ Fuit enim Sulpitius vel maxime omnium, quos quidem ego audiverim, grandis, et, ut ita dicam, tragicus orator. Vox cum magna, tum suavis et splendida: gestus et motus corporis ita venustus, ut tamen ad forum non ad scenam institutus videretur. Incitata et volubilis, nec ea redundans tamen, nec circumfluens oratio. Crassum hic volebat Iulium, Cotta malebat Antonium. Sed ab hoc vis aberat Antonii, Crassi ab illo lepos. *Ibid.* n. 303.

² *Líb. ii. de Orat.* n. 2.

terra mortuis, mare fluctuantibus, litus ejectis? Ita vivunt, dum possunt, ut ducere animam de cœlo non queant: ita moriuntur, ut eorum ossa terra non tangat: ita jactantur fluctibus, ut nunquam abluantur: ita postremo ejiciuntur, ut ne ad saxa quidem mortui conquelescant," &c.⁷ "What is there so common as the air we breathe to the living, the earth to the dead, the water to those who go by sea, and the shore to those who are driven by the waves. By the invention of this punishment, these unhappy wretches, during the short time they retain life in it, live without power to respire the air, and die in such a manner, that their bones cannot touch the earth: they are tossed to and fro in the waves, without being washed by them; and are driven against the rocks and shores, so as never to rest or lie still even in death." The whole passage upon the punishment of parricides, and especially that part of it just quoted, was received with extraordinary applause.⁸ But Cicero, some time after, began to perceive, that this commonplace savoured too much of the young man (he was then twenty-seven years old), and that if he had been applauded, it was less from any real beauty in the passage, than the hopes and promise he then gave of his future merit. And indeed this passage has nothing in it but a glitter without solidity, which dazzles for a moment, but will not bear the least serious examination. The thoughts are far-fetched and unnatural, with a studied affectation of antithesis and contrast.

Cicero very much reformed his taste, and after going to Athens, and into Asia Minor, where, notwithstanding his celebrity for pleading, he became the disciple of the learned rhetoricians who taught there, he returned to Rome almost entirely changed from what he was when he left it.⁹ Molo the Rhodian in particular was of great use to him, in teaching him to retrench the superfluity and redundancy, that proceeded from the warmth and vivacity of his years, and in accustoming him to a less diffused style, to keep within just bounds, and to give his discourse more weight and maturity.¹⁰

The emulation excited in him by the great success of his friend, but rival, Hortensius, was

⁷ Pro Rosc. Amer. n. 73.

⁸ Quantis illa clamoribus adolescentuli diximus de supplicio parricidarum! quæ nequaquam satis deferuisse post aliquanto sentire cepimus. Sunt enim omnia sicut adolescentis, non tam re et maturitate quam spe et expectatione laudati.

⁹ In Brut. n. 316.

¹⁰ Molo dedit operam, si modò id consequi potuit, ut nimis redundantes nos et superfluentes juvenili quadam dicendi impunitate reprimeret, et quasi extra repas diffluentes coerceret. Ita recepi me, biennio post, non modò exercitator, sed propè mutatus.

of infinite service to him. I have spoken of it elsewhere¹¹ with sufficient extent. He seems from that period to have formed the design of carrying from Greece, or at least of disputing with her, the glory of eloquence. He exerted himself in every branch of it courageously, without neglecting one. The simple, the florid, and the sublime styles became equally familiar to him; and he has given us the most finished models in these three species of eloquence. He mentions several places in his treatise *De Oratore*, where he had employed these different kinds of style; and ingeniously confesses, that, if he has not attained perfection in them, he has at least attempted and shadowed it.¹² Nobody knew the heart of man better than he, or succeeded better in moving the springs of it, whether he insinuates into his hearer's favour by the soft and tender passions, or uses those which require bold figures, vehemence, and the strongest and most affecting eloquence.¹³ To be convinced of this, the reader has only to consult his perorations. When pleadings were divided, this last part was always left to him, in which he never failed to succeed in a peculiar manner; not, says he, that he had more wit than others, but because he was more moved and affected himself, without which his discourse would not have been capable of moving and affecting the judges.¹⁴

It was this admirable union and application of all the different qualities of the orator, that occasioned the rapid success of Cicero's pleadings.¹⁵ He owns himself, that Rome had never seen or heard any thing of the like nature before; and that this new species of eloquence charmed the hearers, and carried off all suffrages. That of the ancients, as I have observed before, had abundance of solidity, but was entirely void

11 Belles Lettres.

¹² Nulla est ullo in genere laus oratoris, cujus in nostris orationibus non sit aliqua, si non perfectio, at conatus tamen atque adumbratio. Non assequimur, at, quid deceat, videmus. *Orat.* n. 103.

¹³ Hujus eloquentiæ est tractare animos, hujus omni modo permovere. Hæc modò perfringit, modò irrepit in sensus: inserit novas opiniones, evellit insitas. *Orat.* n. 97.

¹⁴ Si plures dicebamur, perorationem mihi tamen omnes relinquebant: in quo ut viderer excellere, non ingenio sed dolore assequabar—nec unquam is qui audiret incenderetur, nisi ardens ad eum perveniret oratio. *Orat.* n. 130, 132.

¹⁵ Jejuna hujus multiplicis et æqualiter in omnia genera fuscæ orationis aures civitatis accipimus, easque nos primi, quicumque eramus, et quantumcumque dicebamur, ad hujus generis dicendi, audiendi, incredibilia studia convertimus. *Orat.* n. 106.

Propter exquisitius et minimè vulgare orationis genus, animos hominum ad me dicendi novitate converteram. *Brut.* n. 321.

of grace and ornament. Rome, which to their time had neither literature nor delicacy of ear, suffered, and even went so far as to admire them.¹ Hortensius had begun to throw graces into discourse. But besides his negligence in that respect at length, from his being contented with, and secure, as he thought, of his reputation, the ornaments he used consisted rather in words and turns of phrase than thoughts, and had more elegance than real beauty.

Cicero industriously gave eloquence all the graces of which it was susceptible, but without lessening the solidity and gravity of discourse. He departed a little in this from the method of Demosthenes, who, solely attentive to things in themselves, and not in the least to his own reputation, goes on directly to the end in view, and neglects every thing merely ornamental. Our orator thought² himself obliged to comply in some measure with the taste of his times, and the delicacy of the Romans, which required a more pleasing and florid style. He never lost sight of the public utility, but was studious at the same time of pleasing the judges; and in this he said, he served his country more effectually: for his discourse in being agreeable, was necessarily the more persuasive. This beauty, this charm of style, diffused throughout the orations of Cicero, made him seem to obtain that by gentle means, which he actually seized by force; while the judges, who conceived they did no more than follow him of their own accord, were borne away by *bright illusion* and imperious vehemence.³ He also enriched Roman eloquence with another advantage, which highly exalted its value: I mean the disposition of words, which conduces infinitely to the beauty of discourse. For the most agreeable and most solid thoughts, if the terms in which they are expressed want arrangement and number, offend the ear, of which the sense is exceedingly delicate.⁴ The Greeks had been almost four hundred years in possession of this kind of beauty in the admirable works of their writers, who had carried the sweetness and harmony

of disposition to its highest perfection.⁵ In another part of this volume I have described the manner in which Cicero gained the Roman language this improvement. As much must be said of all the other parts of eloquence, of which he either gave the Romans the first knowledge, or at least carried them to their highest perfection; and in this Caesar had reason to say, that Cicero had rendered his country great service.⁶ For by his means Rome, which gave place to Greece only in this kind of glory, deprived her of it, or, perhaps, rose to the point of dividing it with her. Cicero, in consequence, may truly be said to be in respect to Rome, what Demosthenes had before been to Athens; each on his side having carried eloquence to the highest perfection it ever attained.

SECT. IV.

Fourth Age of the Roman Orators.

It is the usual lot of human things, when they have attained their highest perfection, to decline soon, and to degenerate ever after. Eloquence, as well as history and poetry, experienced this sad fatality at Rome. Some few years after the death of Augustus, that region, so fertile of fine works and noble productions, bore no more of those excellent fruits, which had done it so much honour; and as if it had been universally blasted, that bloom of Roman urbanity, that is to say, the extreme delicacy of taste, which prevailed in all works of genius and learning, withered and disappeared almost on a sudden.

A man highly estimable in other respects for his fine genius, rare talents, and learned works, occasioned this change in eloquence: it is easy to perceive that I mean Seneca. A too great esteem for himself, a kind of jealousy for the great men who had appeared before him, a violent desire of distinguishing himself, and to use the expression, of forming a sect, and being the leader for others to follow, made him quit the usual track, and throw himself into paths that were new and unknown to the ancients.

The best things are abused, and even virtues themselves become vices when carried too far.

1 Erant, nondum tritis hominum auribus et erudita civitate, tolerabiles. *Brut.* n. 124.

2 Ne illis quidem nimium repugno, qui dandum putant non nihil esse temporibus atque auribus, nitidius aliquid atque affectatius postulantibus.—Atque id fecisse M. Tullium video, ut cum omnia utilitati, tum partem quandam delectationi daret: cum et ipsam se rem agere diceret (agebat autem maxime) litigatoria. Nam hoc ipso proderat, quod placebat. *Quinctil.* l. xii. c. 10.

3 Cui tanta unquam jucunditas affuit? Ut ipsa illa quæ extorquet, impetrare eum credas; et, cum transversum vi sua Judicem ferat, tamen ille non rapi videatur, sed sequi. *Quinctil.* l. x. c. 1.

4 Quamvis graves suavesque sententia, tamen si inconditis verbis efferuntur, offendunt aures, quare est judicium superbissimum. *Orat.* n. 150.

5 Et apud Græcos quidem jam anni prope quadringenti, cum hoc (numerus) probatur: nos nuper agnovimus. *Orat.* n. 171.

6 Cæsar Tullium, non solum principem atque inventorem copie dixit, quæ erat magna laus; sed etiam bene meritum de populi Romani nomine et dignitate. Quæ enim uno vincebamus à victa Græcia, id aut ereptum illis est, aut certe nobis cum illis communicatum. *Brut.* n. 254.

7 Omnis fatus repressus, exustusque flos siti veteris ubertatis exaruit. *Brut.* n. 16.

The graces with which Cicero had embellished and enriched Roman eloquence, were dispensed soberly and with great judgment: but Seneca lavished them without discretion or measure. In the writings of the first, the ornaments were grave, manly, majestic, and proper for exalting the dignity of a queen: in those of the second, one might almost term them the finery of a courtesan, which, far from adding new lustre to the natural beauty of eloquence, by the profusion of pearls and gems, disguised, and made it disappear. For the soil of Seneca is admirable. No ancient author has either so many, so fine, or so solid thoughts as he. But he spoils them by the turn he gives them, by the antitheses and quibbles with which they are usually larded, by an excessive affectation of ending almost every period with an epigrammatic point, or a kind of glittering thought, a conceit very like it. This made Quintilian say,⁸ it were to be wished, that Seneca in composing had used his own genius, but another's judgment. *Velles eum sua ingenio dixisse, alieno judicio.* What I have observed of him elsewhere⁹ with great extent, renders unnecessary my saying more of him in this place.

PLINY THE YOUNGER.

The Author, of whom I am going to speak, is one of those persons of antiquity that best deserve to be known. I shall first trace a plan of his life from his own letters, in which we shall find all the qualities of the man of honour and probity, with the most amiable goodness of heart and generosity it is possible to imagine. I shall then proceed to give some idea of his style by extracts from his panegyric upon Trajan, which is the only piece of his eloquence come down to us.

Abridgment of the Life of Pliny the Younger.

Pliny the younger was born at Coma, a city of Italy, A. D. 61. His mother was Pliny the naturalist's sister, who adopted him for his son. Having lost his father very early,¹⁰ Virginus Rufus, one of the greatest persons of his age, was his guardian, who always considered him as his own son, and took particular care of him. Virginus, whose virtues had rendered him suspected, and even odious to the emperors, had, however, the good fortune to escape their jealousy and hatred. He lived to the age of fourscore and three, always happy and admired. The emperor Trajan caused his obsequies to be

solemnized with great magnificence; and Tacitus the historian, who was then consul, pronounced his funeral oration. Pliny was no less happy in masters, than he had been in a guardian. We have seen elsewhere, that he studied rhetoric under Quintilian, and that, of all his disciples, he was the person who did him most honour, and also expressed most gratitude for him. The whole sequel of his life will show the taste he had acquired for polite learning of every kind in the school of that celebrated rhetorician. At the age of fourteen he composed a Greek tragedy.¹¹ He exercised himself afterwards in every species of poetry, which he made his amusement. He believed it necessary to hear also Nicetas of Smyrna,¹² a celebrated Greek rhetorician, who was then at Rome. I include Rusticus Arulenus in the number of his masters, who had been tribune of the people in 69, and who professed Stoic philosophy.¹³ His merit and virtue were crimes under an emperor,¹⁴ who was the declared enemy of both, and occasioned the loss of his life. He had taken particular care to form Pliny for virtue, who always retained the highest gratitude for his memory.

Pliny was sent into Syria, where he served for some years at the head of a legion.¹⁵ All the leisure his duty afforded him there, he devoted to the lectures and conversations of Euphrates, a famous philosopher, who believed then that he saw in Pliny all that he afterwards proved. He gives us a fine picture of that philosopher. His air, says he, is serious, without sourness or ill-nature.¹⁶ His presence inspires respect, but neither fear nor awe. His extreme politeness is equalled only by the purity of his manners. He makes war upon vices, not persons; and reforms such as err, but without insulting them.

On his return to Rome, he attached himself more closely than ever to Pliny the naturalist, who had adopted him, and in whom he had the good fortune to find a father, master, model, and excellent guide. He collected his slightest discourses, and studied all his actions. His uncle, then fifty-six years old, was obliged to repair to the coast of Naples, in order to take upon him the command of the Roman fleet at Misenum. Pliny the younger attended him thither, where he lost him by the unhappy accident I have related elsewhere.

Destitute of that support, he sought no other

11 Epist. iv. l. 7.

12 Ep. vi. l. 6.

13 Ep. xiv. l. 1.

14 Domitian.

15 Ep. x. l. 1.

16 Nullus horror in vultu, nulla tristitia, multum severitatis. Reverentis occursum, non reformides. Vitam sanctitatis summa, comitas par. Insectatur vitia, non homines: nec castigat errantes, sed emendat.

8 Lib. i. c. 1.

9 Belles Lettres.

10 Epist. l. l. 2.

than his own merit, and applied himself wholly to public affairs. He pled his first cause at nineteen years of age.¹ Young as he was, he spoke before the centumviri in an affair, wherein he was under the necessity of contending with all the persons of the highest credit in Rome, without excepting those, whom the prince honoured with his favour.² It was this action that first made him known, and opened the way for the reputation he afterwards acquired.³ He retained from that period an approbation as universal as extraordinary in a city, where neither competitors nor envy were idle. He had more than once the satisfaction of seeing the entrance of the bar entirely shut up by the multitude of hearers, who waited when he was to plead.⁴ He was obliged to go to his place through the tribunal where the judges sat; and sometimes spoke seven hours, on which occasions he himself was the only person tired in the assembly. He never pled but for the public interests, his friends, or those whose ill fortune had left them none.⁵ Most of the other advocates sold their assistance, and to glory, of old the sole reward of so noble an employment, had substituted a sordid traffic of gain. Trajan, to reform that disorder, published a decree,⁶ which, at the same time it gave Pliny great pleasure, did him no less honour. "How pleased I am," said he, "not only never to have entered into any agreement about the causes in which I have been concerned, but to have always refused all kind of presents, and even new-year's gifts, upon account of them! It is true, indeed, that every thing repugnant to honour is to be avoided, not as prohibited, but as infamous."⁷ There is, however, great satisfaction in seeing that prohibited, which one never allowed one's self to do." He made it a pleasure, and even a duty, to assist with his advice, and to bring forward young persons of family and promise to the bar.⁸ He would not undertake some causes, but upon condition of having a young advocate joined with him in them. It was the highest joy to him, to see

them begin to distinguish themselves in pleading, by treading in his steps, and following his counsels.⁹ From how good a heart, from what a fund of love for the public, do such sentiments flow!

It was by these steps that Pliny soon rose to the highest dignities of the state. He always retained the virtues in them by which they were acquired. In the time of Domitian he was prætor. That savage prince, who looked upon innocence of manners as a censure of his own conduct, banished all the philosophers from Rome and Italy. Artemidorus, one of Pliny's friends, was of this number, and had withdrawn to a house that he had without the gates of the city.¹⁰ "I went thither to see him," says Pliny, "at a time when my visit was most remarkable and most dangerous. I was prætor. He could not discharge the debts he had contracted for many noble uses without a great sum of money. Some of the richest and most powerful of his friends would not see the difficulty he was under. As to me, I borrowed the sum, and made him a present of it. I had however great reason to tremble for myself. Seven of my friends had just before either been banished or put to death. Of the latter were Senecio, Rusticus, and Helvidius: the exiles were Mauricus, Gratilla, Arria, and Fannia. The thunder which fell so often, and still smoked around me, seemed evidently to presage the like fate for myself."¹¹ But I am far from believing that I deserve on this account all the glory Artemidorus gives me: I only avoided infamy." Where shall we find now such friends and such sentiments? I admire Pliny's good fortune, worthy man as he was, in escaping the cruelty of Domitian. I could wish that he owed this obligation to his master and friend Quinctilian, who had undoubtedly great credit with the emperor, especially after he had charged him with the education of his sister's grandsons. History says nothing upon this head: it only informs us, that an accusation fully prepared against Pliny was found among Domitian's papers.

The bloody death of that emperor, who was succeeded by Nerva, A. D. 96, restored tranquillity to persons of worth, and made the bad tremble in their turn.¹² A famous informer, named Regulus, not satisfied with having fomented the prosecution of Rusticus Arulenus, had besides tri-

1 Ep. viii. l. 5.

2 Ep. xviii. l. 1.

3 Illa actio mihi aures hominum, illa janua fame patefecit.

4 Ep. xvi. l. 4.

5 Ep. xiv. l. 5.

6 It was ordained by this decree, that all persons who had causes should make oath that they had neither given nor promised, nor caused to be given or promised, any thing to the advocate concerned for them. After the suit was determined, it admitted giving to the amount of ten thousand sesterces (about £60 sterling). Ep. xxi. a. 5.

7 Oportet quidem quæ sunt inhonestæ, non quasi illicita, sed quasi pudenda, vitare. Jucundum tamen, si prohiberi publicè videas, quod nunquam tibi ipse permisisset.

8 Ep. xxiii. l. 6.

9 O diem lætum, notandumque mihi candidissimo calculo! Quid enim aut publicè lætus, quam clarissimos juvenes nomen et famam ex studiis petere; aut mihi optatius, quam me ad recta tendentibus quasi exemplar esse propositum?

10 Ep. xi. l. 3.

11 Tot circa me jactis fulminibus quasi ambustus, mihi quoque impendere idem exitum certis quibusdam notis augurarer.

12 Ep. v. l. 1.

triumphed over his death, by insulting his memory with writings full of injurious reproaches and insolent ridicule. Never was man so abject, cowardly, and creeping, as this wretch appeared after Domitian's death; which is always the case with such venal prostitutes to iniquity, who have no sense of honour. He was afraid of Pliny's resentment, the declared friend of Rusticus in all times. Besides, he had attacked him personally in Domitian's life; and in a public pleading at the bar, had laid a murderous snare for him by an insidious question in respect to a person of worth, whom the emperor had banished, which exposed Pliny to certain danger, had he openly declared the truth, or would have dishonoured him for ever, had he betrayed it. This base wretch left nothing undone to avert Pliny's just revenge, employed the recommendation of his best friends, and came to him at last in person, to implore him with the most abject and abandoned submissions to forget the past. Pliny did not think fit to explain himself, being willing, before he determined in the affair, to wait the arrival of Mauricus, the brother of Rusticus, who was not yet returned from banishment. It is not known how this business ended.

Another of the same kind did him much honour.¹³ As soon as Domitian was killed, Pliny, upon mature deliberation, judged the present a very happy occasion for prosecuting the vile, avenging oppressed innocence, and acquiring great glory. He had contracted a particular friendship with Helvidius Priscus, the most virtuous and most revered person of his time, as also with Arria and Fannia, of whom the first was the wife of Pætus Thrasea and Fannia's mother, and the latter the wife of Priscus. The senator Publicius Certus, a man of great power and credit, designed for consul the ensuing year, had urged the death of Helvidius, who was also a senator of consular dignity, even in the senate. Pliny undertook to avenge his illustrious friend. Arria and Fannia, who were returned from banishment, joined him in so generous a design. He had never done any thing without the advice of Corellius, whom he considered as the wisest and most able person of the age.¹⁴ But upon this occasion, knowing him to be a man of too timorous and circumspect a prudence, and at the same time, that in resolutions wisely taken,¹⁵ it is not proper to consult persons, whose counsels are a kind of order to the consulter, he did not impart his design to him, and contented himself with communicating it upon the very day it was to be put in execution, but without asking his opinion. The senate being assembled, Pliny repaired thither, and demanded permission to speak. He

began with great applause, but as soon as he had opened the plan of the accusation, and had sufficiently designated the criminal, without naming him however hitherto, the senate rose up against him on all sides. He heard all their outcries without trouble or emotion, while one of his friends of consular dignity intimated to him softly, but in very lively terms, that he had exposed himself with too much courage and too little prudence, and pressed him earnestly to desist from his accusation; adding, at the same time, that he would render himself formidable to succeeding emperors. "So much the better," replied Pliny, "if they are bad ones." They at length proceeded to give their opinions, and the first who spoke, which were the most considerable of the senate, apologized for Certus, as if Pliny had actually named him, though he had not yet done so. Almost all the rest declared in his favour. When it came to Pliny's turn to speak, he treated the subject in all its extent, and replied to every thing that had been advanced. It is not conceivable with what attention and applause, even those who a little before had opposed him, received all he said, so sudden was the change produced either by the importance of the cause, the force of the reasons, or the courage of the accuser. The emperor did not judge it proper that the proceedings should go on. Pliny however carried what he proposed. Certus's colleague obtained the consulship, as had been before intended: but as for himself, another was nominated in his stead. What an honour was this for Pliny! A single man, by the idea conceived of his zeal for the public good, brings over all the suffrages to his own side, supports the dignity of his order, and restores courage to so august an assembly as the Roman senate, at a time when the terror of the preceding reign still rendered it timorous and almost speechless.

I shall repeat two other occasions also, in which, not as a senator, but an advocate, he displayed both the force of his eloquence, and his just indignation against the oppressors of the people in the provinces. They are both of the same time, but the year is not precisely known.

In the first, "We see an event famous from the rank of the person, salutary by the severity of the example, and memorable for ever from its importance."¹⁶ I shall use Pliny's own words, but shall abridge his account considerably.

"Marius Priscus, proconsul of Africa, accused^e by the Africans, without proposing any defence, confines himself to demanding the ordinary judges. Tacitus and myself (says Pliny) being charged by order of the senate with the cause of that people, believed it our duty to remonstrate, that the crimes in question were too

¹³ Ep. xiii. l. 9.

¹⁴ Ep. xvii. l. 4.

¹⁵ Expertus usu, de eo quod destinaveris non esse consulendos, quibus consultis obsequi debeas.

¹⁶ Ep. xi. l. 2.

enormous to admit of a civil trial. For Priscus was accused of no less than selling condemnation, and even the lives of innocent persons.—Vitellius Honoratus and Flavius Martianus were cited as his accomplices, and appeared. The first was accused of having purchased the banishment of a Roman knight, and the deaths of seven of his friends, for three hundred thousand sesterces.¹ The second had given seven hundred thousand,² to have various torments inflicted upon another Roman knight. This latter had been first condemned to be whipped, then sent to the mines, and at last strangled in prison. But a fortunate death saved Honoratus from the justice of the senate. Martianus therefore was committed without Priscus. Upon some debates which arose upon this affair, it was referred to the first assembly of the senate. This assembly was most august. The prince³ presided in it, being then consul. It was about the beginning of January, when the senate is generally most numerous. Besides the importance of the cause, the noise it had made, and the natural curiosity of all men to be eye-witnesses of great and extraordinary events, had drawn together from all parts a great multitude of auditors. You may imagine the trouble and apprehension we were under, who were to speak in such an assembly, and in the presence of the emperor. I have spoke more than once in the senate, and may venture to say, that I never was so favourably heard anywhere: notwithstanding which every thing daunted me, as if entirely new to me. The difficulty of the cause embarrassed me almost as much as the rest. I considered in the person of Priscus, a man, who, a little before, was of consular dignity, was honoured with an important priesthood, of both which titles he was then divested. I was sincerely concerned at being obliged to accuse an unfortunate person already condemned. If the enormity of his crime urged strongly against him; pity, which usually succeeds a first condemnation, pled no less in his favour. At length I took courage, began my discourse, and received as many applauses as I had fears before. I spoke almost five hours: for I was granted an hour and a half more than was at first allowed me.⁴ All that seemed difficult and adverse when I had it to say, became easy and favourable when I said it. The emperor's goodness and care, I dare not call it anxiety, for me, went so far, that he ordered me several times to be admonished by a freedman, who stood behind me, to spare myself, and not to forget the weak-

ness of my constitution. Claudius Marcellinus defended Martianus. The senate adjourned to the next day; for there was not sufficient time for going through a new pleading before night. On the morrow Salvius Liberalis spoke for Priscus. He is a subtle orator, disposes his subject with method, has abundance of vehemence, and is truly eloquent.⁵ All these talents he displayed this day. Tacitus replied with much eloquence, in which the great and the sublime of his character distinguished itself not a little.⁶ Catus Fronto rejoined very finely for Priscus; and as he spoke last, and there was but little time remaining, he endeavoured more to move the judges, than to justify the accused. Night came on, and the affair was referred to the next day. The question then was to examine the proofs, and proceed to vote. It was certainly something very noble, and highly worthy of ancient Rome, to see the senate assembled, and employed for three days successively, without separating till night. Cornutus Tertullus, consul elect, a person of extraordinary merit, and most zealous for justice, was the first that gave his opinion. It was to condemn Priscus to pay the seven hundred thousand sesterces he had received into the public treasury, and to banish him from Rome and Italy. He went farther against Martianus, and was for having him banished even from Africa; and concluded with proposing to the senate, to declare that Tacitus and I had faithfully and worthily answered their expectation in acquitting ourselves of our commission.⁷ The consuls, and all the persons of consular dignity, who spoke afterwards, were of the same opinion. Some division ensued: but at last every body came over to Cornutus. Pliny makes an end of his letter with a stroke of gaiety. "You are now," says he to his friend, "fully informed of what passes here. Let me know in your turn what you do in the country. Send me an exact account of your trees, your vines, your corn, and your cattle; and assure yourself, that if I have not a very long letter from you, you shall have but very short ones from me for the future. Adieu."

It appears that Pliny was in a manner the refuge and asylum of the oppressed provinces.⁸ The deputies from Bœtica⁹ implored the senate to appoint Pliny to be their advocate in the suit they had commenced against Cæcilius Classicus, late governor of that province. Whatever other

5 Vir subtilis, dispositus, acer, disertus.

6 Respondit Cornelius Tacitus eloquentissimè, et, quod eximium orationi ejus inest, *etiam*.

7 Ego et Tacitus. The Latin is more simple and less ceremonious. I and Tacitus. Perhaps the senate's vote named Pliny first.

8 Ep. iv. et ix. l. 8.

9 Andalusia is a great part of what the ancients called Bœtica.

1 About £1900 sterling.

2 About £4350 sterling.

3 Trajan.

4 Nam decem clepeydria, quas spatiosissimè acceperam, non addidit quatuor.

employments he might have, he could not refuse that people his assistance, for whom he had before pled upon a like occasion. For, says Pliny, you cancel your first good offices, if you do not repeat them.¹⁰ Oblige an hundred times, and refuse once, men (for such is their nature) forget every thing but the refusal. Accordingly he undertook their cause. Either a voluntary or natural death saved Classicus from the consequences of this prosecution. Bætica however did not omit to demand that it should go on; for so the laws required; and accused at the same time the ministers and accomplices of his crimes, demanding justice against them. The first thing that Pliny believed it necessary to establish, was, that Classicus was guilty, which it was not difficult to prove. He had left among his papers an exact memorandum in his own handwriting of the gains he had made by his several extortions. Probus and Hispanus, two of his accomplices, gave more trouble. Before he entered upon the proof of their crimes, Pliny judged it necessary to show, that the execution of a governor's orders in what was manifestly unjust, was criminal; without which it had been losing time to prove them Classicus's instruments. For they did not deny the facts laid to their charge, but excused themselves by pleading that they were reduced to them by obedience to their superior, which according to them sufficed for their vindication. They pretended, that such obedience could not be made criminal in them, as they were natives of the province, and consequently accustomed to tremble at the least command of the governor. Their advocate, who was a person of great ability, confessed afterwards, that he never was so much perplexed and disconcerted, as when he saw the only arms in which he had placed his whole confidence, wrested out of his hands. The event was as follows. The senate decreed, that the estate of Classicus, before he took possession of his government, should be separated from what he had afterwards acquired. The first was adjudged to his daughter, and the rest to the people of Bætica. Hispanus and Probus were banished for five years; so black did that which at first seemed scarce criminal, appear after Pliny had spoke. The other accomplices were prosecuted with the same effect. What constancy and courage had Pliny, and how much must he have abhorred injustice and oppression? What a happiness was it for the remote provinces, as Andalusia was, where the governors, like so many petty tyrants, making their will their law, plundered and oppressed the

people with impunity, to have a zealous and intrepid defender, whom neither credit nor menaces were capable of swaying in the least! For these public robbers find protection, and are seldom made examples, which can alone put a stop to such pernicious abuses.

Pliny's zeal was soon rewarded in a conspicuous manner.¹¹ He was actually made prefect of the treasury, that is to say high-treasurer, with Cornutus Tertullus, A. D. 99, which office he held two years, when they were both nominated consuls to be substituted to the usual ones for the following year. Trajan spoke in the senate to have this honour conferred upon them, presided in the assembly of the people at their nomination, and proclaimed them consuls himself. He gave them great praises, and represented them as men, who equalled the ancient consuls of Rome in their love of justice, and the public good. "It was then I perfectly knew," says Pliny speaking of his colleague, "what kind of man, and of what value, he was. I heard him as a master, and respected him as a father, less on account of his advanced age, than his profound wisdom."¹²

Pliny, when consul, A. D. 100, pronounced in his own and his colleague's name, an oration to thank Trajan for having conferred that dignity upon them, and to make his panegyric according to the order he had received from the senate, and in the name of the whole empire. I shali have occasion in the sequel to speak of this panegyric.

About the end of the year 103, Pliny was sent to govern Pontus and Bithynia in quality of proconsul. His sole employment there was to establish good order in his government, to execute justice, to redress grievances, and soften subjection. He had no thoughts of attracting respect by the pomp of equipage, difficulty of access, haughtiness in hearing, and insolence in giving answers. A noble simplicity, an always frank and easy reception, an affability that sweetened necessary refusals, with a moderation that never departed from itself, conciliated the affection of every body.

Trajan, otherwise the most humane and just of princes, had set on foot a violent persecution against the Christians. Pliny, from the necessity of his office, and in consequence of his blindness, had his share in it. But the natural sweetness of his disposition made him averse, at least in some measure, to inflict punishments upon persons guilty of no crime. In consequence, finding himself perplexed in the execu-

¹⁰ Est ita natura comparatum, ut antiquiora beneficia subvertas, nisi illa posterioribus cumules. Nam, quamlibet sæpe obligati, si quid unum neget, hoc solum meminerunt, quod negatum est.

¹¹ In Panegyric. Traj.

¹² Tunc ego qui vir et quantus esset, altissimè insepexi: quem sequeretur ut magistrum, ut parentem viderer: quod non tam ætatis maturitate, quam vita, merebatur. Ep. xlii. l. 5.

tion of the emperor's orders, he wrote him a letter upon that head, and received an answer, which, of all the monuments of paganism, are perhaps those that do most honour to the Christian religion. I shall insert both at length in this place.

*Pliny's Letter to the Emperor Trajan.*¹

"It is a part of my religion, Cæsar, to explain all my scruples to you. For who can either determine or instruct me better? I never was present at the proceedings against any Christian: so that I neither know upon what the information against them turns, nor how far their punishment should extend. I am much at a loss about the difference of age. Must young and old without distinction suffer the same inflictions? Are not those who repent to be pardoned; or is it to no purpose to renounce Christianity, after having once embraced it? Is it the name only that I am to punish in them, or are there any crimes annexed to that name? However it may be, I have made this my rule in respect to the Christians brought before me. Those who have owned themselves such, I have interrogated a second and third time, and threatened them with punishment. When they perished, I ordered it accordingly. For of whatever nature their confession was, I believed it indispensably necessary to punish in them their disobedience and invincible obstinacy. There were others possessed with the same frenzy, whom I have reserved in order to send them to Rome, because they are Roman citizens. Accusations of this kind becoming afterwards more frequent even from being set on foot, as is usual, various kinds of them offer. A memorial has been put into my hands, wherein several persons are accused of being Christians, who deny that they either are or ever were so. They have in my presence, and in the terms I prescribed, invoked the gods, and offered incense and wine to your image, which I caused expressly to be brought out with the statues of our divinities. They have even uttered violent imprecations against Christ. And this, I am told, is what none, who are truly Christians, can ever be forced to do. I believed it therefore necessary to acquit them. Others, who have been brought before me by an informer, have at first confessed themselves Christians, and immediately after denied it; declaring that they had indeed been so, but that they had ceased to be so, some above three, and others a greater number of years, and some for more than twenty. All these people have adored your image, and the statues of the gods; and all of them loaded

Christ with curses. They have affirmed to me, that their whole error and fault consisted in these points: That on a day fixed, they assembled before sunrise, and sung alternately hymns to Christ as to a god; that they engaged themselves by oath, not to any crime, but not to rob or commit adultery; to be faithful to their promise, and not to secrete or deny deposits: That after this it was their custom to separate, and then to reassemble, in order to eat promiscuously some simple and innocent food: That they had ceased to do so since my edict, by which, according to your orders, I had prohibited all assemblies whatsoever. These depositions convinced me more than ever, that it was necessary to extort the truth by force of torments out of two virgin slaves, whom they said were priestesses of their worship: but I discovered only a bad kind of superstition, carried to excess; and for that reason have suspended every thing till I have your farther orders. The affair seems worthy of your reflection, from the multitude of those involved in the danger. For great numbers of all ages, sexes, and conditions, are liable to this accusation. This contagious evil has not only infected the cities, but has reached the villages and country. I believe however that it may be remedied, and that a stop may be put to it: and it is certain that the temples, which were almost entirely abandoned, are now frequented; and that the long neglected sacrifices are renewed. Victims are sold everywhere, which before had few purchasers. From this it may be judged what numbers may be reclaimed, if pardon be granted to repentance."

*The Emperor Trajan's Answer to Pliny.*¹

"You have, most dear Pliny, taken the method you ought in proceeding against the Christians brought before you: for it is impossible to establish a certain and general form in affairs of such a nature. It is not necessary to make strict inquiries after those people: but if they are accused and convicted, they must be punished. However, if the accused denies that he is a Christian, and proves he is not by his behaviour, I mean by invoking the gods, it is proper to pardon him on his repentance, whatever causes of suspicion may before have been laid to his

2 Affirmabant autem hanc fuisse summam vel culpæ, vel erroris, quod essent soliti statò die ante locum convenire; carmenque Christo, quasi deo, dicere secum invicem; seque sacramento non in scelus aliquod obstringere, sed ne furta, ne latrocinia, ne adulteria committerent, ne fidem fallerent, ne depositum appellari abnegarent: quibus peractis, morem sibi discedendi fuisse, rursusque coeundi ad capendum cibum, precibus tamen et innoxium.

¹ Ep. xcviil. l. 10.

³ Ep. xcviil.

charge. *For the rest, anonymous informations ought not to be received in any kind of crime : for that were of pernicious example, and does not suit the times in which we live.*"⁴

I leave it to the reader to make the reflections, these two letters naturally suggest, upon the magnificent praise they include of the purity of manners of the primitive Christians, the amazing progress Christianity had already made in so few years, even to occasion the temples to be abandoned; the incredible number of the faithful of all ages, sexes, and conditions; the authentic testimony rendered by a Pagan of the belief of the divinity of Jesus Christ generally established amongst those faithful; the remarkable contradiction of Trajan's opinion, for if the Christians were criminal, it was just to make strict inquiry after them, and if not, it was unjust to punish them though accused; and lastly upon the maxim taken from the law of nature, with which the emperor concludes his letter, in declaring, that he should deem it a dishonour to his age, if, in any crime whatsoever, (the expression is general) regard were had to informations without the names of their authors.

On Pliny's return to Rome, he resumed business and his employments. His first wife being dead without children, he married a second named Calphurnia. As she was very young, and had good natural talents, he found no difficulty in inspiring her with a taste for polite learning. It became her sole passion; but she reconciled it so well with her affection for her husband, that it could not be said whether she loved Pliny for polite learning, or polite learning for Pliny.⁵ When he was to plead some important cause, she always had several persons waiting to bring her the first news of his success, and the emotion that expectation occasioned ceased only with their return. If he read any oration or other piece to an assembly of his friends, she never failed to contrive herself some place, whence behind a curtain she might overhear the applauses given him. Her husband's works were continually in her hand, and with no other art but love for her master, she composed airs upon the lyre to his verses. His letters to her show how far he carried his tenderness for a wife so worthy of his affection and esteem.⁶ "You tell me that my absence gives you pain, and that your sole consolation is reading my works, and often laying them by you in my place. I am transported with joy that you desire me so ardently, and at your manner of consoling yourself. As for me, I read your

letters over and over, and am perpetually opening them again as if they were new ones. But they only serve to aggravate the regret I feel in waiting you. For what felicity must one not find in the conversation of her, whose letters have such charms! Fail not, however, to write often to me, though it gives me a kind of pleasure that torments me." In another letter⁷ he says: "I conjure you most earnestly, to prevent my anxiety by one and even two letters every day. I shall at least feel hope while I read them, though I fall into my first alarms afterwards." In a third,⁸ "To tell you to what a degree your absence affects me would seem incredible. I pass the greater part of my nights in thinking of you. In the day and at the hours I used to see you, my feet in a manner carry me of themselves to your apartment; and not finding you there, I return with as much sadness and confusion, as if I had been refused entrance."

After having received some hurt at her first time of being with child, she recovered, and lived a considerable time, but left him no issue.⁹

Neither the time nor circumstances of Pliny's death are known.

I have not pretended hitherto to give an exact and continued account of Pliny's actions, but only an idea of his character by some events more remarkable than others, and consequently the most proper for making it known. I shall with the same view add some other facts, without confining myself to the order of time, and shall reduce them to four or five heads.

I. *Pliny's Application to Study.*

It had been strange if Pliny, brought up in the sight and under the care of his uncle Pliny the naturalist, had wanted a taste for the sciences, and indeed had not devoted himself entirely to them. We may believe that in his first studies he followed the plan he laid down for a young man who had consulted him upon that subject. As this letter may be useful to youth, I shall insert part of it here.¹⁰

"You ask me in what manner I would advise you to study. One of the best methods, according to the opinion of many, is to translate Greek into Latin, or Latin into Greek. By that you will acquire justness and beauty of diction, happiness and grace of figures, and facility in expressing your sense; besides, in that imitation of the most excellent authors, you will insensibly contract a habit of thinking and expressing yourself like them. A thousand things which escape a man that reads, do not escape a translator. Transla-

⁴ Sine auctore verò propositi libelli nullo crimine locum habere debent. Nam et pessimi exempli, nec nostri secuti est.

⁵ Ep. xix. l. 4.

⁶ Ep. vii. l. 6.

⁷ Ep. iv. l. 6.

⁸ Ep. x. l. 8.

⁹ Ep. vii. l. 7.

¹⁰ Ep. ix. l. 7.

tion enlarges the mind, and forms the taste. You may also, after having read something only for the sake of making it your subject, treat it yourself, with the resolution not to be excelled by your original. You may then compare your work with your author's, and carefully examine what he has done better than you, and you better than him. What a joy will it be to you, to perceive yours sometimes the best; and how much will it redouble your emulation, should you find yourself always the inferior! "I know your present study is the eloquence of the bar: but for the attainment of that, I would not advise you to confine yourself entirely to that contentious style, that breathes nothing but war and debate. As fields delight in change of seeds, our minds also require to be exercised in different studies. I would therefore have you sometimes make a fine piece of history your employment, sometimes the composition of a letter, and sometimes verses——It is in this manner the greatest orators, and even the greatest men, have exercised or unbended themselves; or rather have exercised and unbended both together. It is amazing how much these little works awaken and exhilarate the genius. I have not said what it is necessary to read, though the having mentioned what it is proper to write, sufficiently speaks that. Remember only to make a good choice of the best authors in every kind; for it has been well said, that it is necessary to read much, but not many things."¹

We have seen that Pliny at the age of fourteen wrote a Greek tragedy, and afterwards exercised himself in the several species of poetry. He was much delighted with reading Livy. He admired the ancients, without being of the number of those, who despise the moderns.² I cannot believe, says he, that nature is become so barren and exhausted, as to produce nothing valuable in our days.

He tells a friend³ in what manner he employs himself during the public diversions. "I have passed all these last days in composing and writing with the greatest tranquillity imaginable. You may ask how that is possible in the midst of Rome? It was the time of the shows in the Circus which gave me no manner of pleasure. I see nothing new or varied in them, and consequently nothing worth seeing more than once. This redoubles my astonishment, that so many thousand—and even grave persons—should have a puerile passion for seeing horses run, and men driving chariots, so often. When I consider

this insatiable desire to see these trifling common sights over and over again, I feel a secret satisfaction in taking no pleasure in such things, and am glad to employ a leisure in polite studies, which others throw away upon such frivolous amusement."⁴

We see study was his whole joy and consolation.⁵ "Literature," says he, "is my diversion and comfort; and I know nothing so agreeable as it is to me, and nothing so mortifying as not to be softened by it. In my grief for my wife's indisposition, the sickness of my family, and even the deaths of some of them, I find no remedy but study."⁶ It indeed makes me more sensible of adversity, but renders me also more capable of bearing it."⁷

II. Pliny's esteem and attachment for persons of virtue and learning.

All the great men of his age, all who were most distinguished by eminent virtues, were Pliny's friends: Virginius Rufus, who refused the empire; Corellius, who was considered as a perfect model of wisdom and probity; Helvidius, the admiration of his times; Rusticus Aruleus and Senecio, whom Domitian put to death; and Cornutus Tertullus, who was several times his colleague. He thought it also highly for his honour to have contracted a particular amity with the persons, who made the greatest figure then in polite learning, Tacitus, Suetonius, Martial, and Silius Italicus. "I have read your books," says he to Tacitus, "and have observed with all the exactness in my power what I believe it necessary to alter and retrench: for I love no less to speak truth, than you to bear it; besides, no people are more docile to reproof, than those who deserve most praise." I expect that you will send back my book in your turn with your corrections. Agreeable, charming exchange! How much am I delighted to think, that if posterity sets any value upon us, it will publish to the end of time with what freedom, simplicity, and friendship we lived together."⁸

⁴ Quos ego (quosdam graves homines) cum recorder in re inani, frigida, assidua, tam insatibiliter desiderare, capio aliquam voluptatem, quod hac voluptate non capiar. Ac per hos dies libentissimè otium meum in literis colloco, quos alii otiosissimis occupationibus perdunt.

⁵ Ep. xix. l. 8.

⁶ Ad unicum doloris levamentum studia conugio, que præstant ut adversa magis intelligam, sed patientius feram.

⁷ Ep. xx. l. 7.

⁸ Nam et ego verum dicere assuevi, et tu libenter audire. Neque enim ulli patientiùs reprehenderetur, quam qui maxime laudari merentur.

⁹ O jucundas, ô pulcras vices! Quam me delectat, quod, si qua posteris cura nostri, usquequaque narrabitur, qua concordia, fide, simplicitate vixerimus! Erit rarum et inigne, duos homines arte, dignitate propemodum æqua-

¹ Aiunt multum legendum esse, non multa.

² Sum ex iis qui mirer antiquos; non tamen, ut quidam, temporum nostrorum ingenia despicio. Neque enim quasi læsa et effrta natura, ut nihil jam laudabile pariat. Ep. xxi. l. 6.

³ Ep. vi. l. 9.

will be something rare and remarkable, that two men almost of the same age, of the same rank, and of some reputation in the republic of letters, (for I am reduced to speak modestly of you, when I join you with myself) should have assisted each other's studies so faithfully. As for me, from my most early youth, the reputation and glory you had acquired, made me desirous of imitating you, and of treading, and of appearing to tread, in your steps, not near you, but nearer than another. It was not because Rome had not at that time abundance of geniuses of the first rank: but among them all the similitude of our inclinations pointed out you, as the most proper, as the most worthy of being imitated. This is what highly augments my joy, as often as I hear it said, that, when conversation turns upon polite learning, we are named together."

We may conceive how studious Pliny was to oblige the historian Suetonius, from what he writes of him to a friend. This letter,¹⁰ though short, is one of the most elegant of his come down to us. "Suetonius, who lodges with me, is for buying a little spot of land, which one of your friends is disposed to sell. Favour me so far, I beg you, as not to let him give more for it than it is worth; which will make him like his purchase. A bad bargain is always disagreeable; but most so, in seeming to reproach us with imprudence. This bit of land, if not too dear, has many temptations for my friend: its small distance from Rome, the goodness of the ways, the mediocrity of its buildings, with its appurtenances more fit to amuse than employ. For these men of learning, devoted like him to study, want only as much land as is necessary for unbending their minds and delighting their eyes in good air. A single alley to walk in, a back way into the fields, and as many vines and plants as they can be acquainted with without burdening their memories, abundantly suffice them. I tell you all this, that you may know the better how much he will be obliged to me, and I to you, if he can buy this little place, with these recommendations, without any reason to repent it."¹¹

Martial, so well known from his epigrams, was also one of Pliny's friends, and the death of

that poet gave him great concern.¹² "I am informed," said he, "that Martial is dead, and am very sorry for it. He was an ingenious, subtle, sharp man, and had abundance both of salt and gall, with no less candour, in his writings." When he left Rome, I gave him something to help him on his journey; which little assistance I owed him, as well on account of our friendship, as the verses he had made for me. It was the ancient custom to confer rewards either of honour or profit, upon such as had written in praise of cities or certain individuals. But that custom, with many others no less noble and decent, is one of the last in modern practice. Ever since we have ceased to do what deserved praise, we have despised it as a thing of no value."¹⁴ Pliny repeats the passage of those verses, in which the poet, addressing himself to his muse, bids her go to Pliny at his house upon the Esquiline hill, and approach him with respect.

Sed ne tempore non tuo disertam
Pulvis ebrâ januam, videto,
Totos dat tetrica dies Minervæ,
Dum centum studet auribus virorum
Hoc quod secula posterique possint
Arpinis quoque comparare chartis.
Seras tutior libis ad lucernas:
Hæc hora est tua, cùm furit Læus,
Quum regnat rœa, quum madent capilli.
Tunc me vel rigidi legant Catones.

Mr. Sacy has translated these verses into French, thus:

Prends garde, petite ivrognesse,
De n'aller pas, à contre-temps,
Troubler les emplois importants
Où du soir au matin l'occupe sa sagesse.
Respecte les moments qu'il donne à des discours
Qui font le charme de nos jours,
Et que tout l'avenir, admirant notre Plîne
Osera comparer aux Oracles d'Arpine.

abunde tantum soli, ut relevare caput, rescire oculos, reptare per limitem, unanque semitam terere, omnesque viticulas suas nosse, et numerare arbusculas possint. Hæc tibi exposui, quo magis scires, quantum ille esset mihi, quantum ego tibi debiturus, si prædiolum istud, quod commendatur his dotibus, tam salubriter emerit, ut penitentius locum non relinquat. Vale. Mr. Rollin adds, "that the French tongue cannot render the delicacy and elegance of the diminutives and frequentatives scattered in abundance throughout this little letter." Agellum Venditare. Reptare per limitem. Viticulas. Arbusculas. Prædiolum.

12 Ep. xxi. l. 3.

13 Erat homo ingeniosus, acutus, acer, et qui plurimum in scribendo et salis haberet et fellis, nec candoris minus.

14 Fuit moris antiqui, eos qui vel singulorum laudes vel urbium scriperant, aut honoribus aut pecunia ornare: nostris vero temporibus, ut alio speciosa et egregia, ita hoc inprimis exolevit. Nam postquam desimus facere laudanda, laudari quoque ineptum putamus.

les, nonnullius in literis nominis, (cogor enim de te quoque parcius dicere, quia de me simul dico) alterum alterius studia foviasse.

10 Ep. xxiv. l. 1.

11 Tranquillus, contubernalis meus, vult emere agellum, quem venditare amicus tuus dicitur. Rogo cures, quanti æquum est, emat: ita enim delectabit emisse. Nam mala emptio semper ingrata est, eo maxime quod exprobare stultitiam domino videtur. In hoc autem agello (si modo ariserit pretium). Tranquilli mei stomachum multa sollicitant: vicinitas urbis, opportunitas viæ, mediocritas villæ, modus ruris, qui avocet magis quam distringat. Scholasticis porro studiosis, ut hic est, sufficit

J'trends l'heure que les deux propos,
Enfants des verres et des pots,
Ouvrent tout l'esprit à la joie ;
Qu'il se détend, qu'il se déploie,
Qu'on traite les sages de sots ;
Et qu'alors, en humeur de rire,
Les plus Catons te puissent lire.

[The same verses in English.

Wanton muse, awhile forbear,
Of improper times beware ;
Knock not at his learned gate ;
All day long affairs of weight—
A thousand hearers all day long
To his charming accents throng :
Strains so sweetly wise, so rare,
Future ages shall compare
To those of Arpinas's son, (1)
Though from Greece the palm he won.
Stir not there till ev'ning hours,
Till Bacchus reigns, and softer powers ;
When crowned with roses, sweet with oils,
Mirth laughs at care, and learned toils :
Then take thy time devoid of fear,
When Cato's self thy lays would hear.]

"Do you not think," says Pliny in concluding his letter, "that the man who wrote of me in these terms, well deserved some tokens of my affection at his departure, and of my grief at his death."

He also very much lamented that of Silius Italicus, on whose poetry he passes a judgment entirely just.⁵ "He wrote verses," says he, "with more art than genius."⁶ An incurable abscess having given him a disgust for life, he ended his days by a voluntary abstinence from food.

III. Pliny's Liberality.

Pliny, in comparison with some of the rich persons of Rome, had but a very moderate fortune, but a soul truly great, and the most noble sentiments. Of this his almost innumerable liberalities are an undoubted proof. I shall relate only a part of them. He had laid down principles to himself upon this head which well deserve attention: "In my opinion," says he, "a man truly liberal should give to his country, his relations by blood or marriage, and his friends, but his friends in necessity."⁷ This is the order in giving that equity prescribes, and which he followed exactly.

We have already seen that he made a very generous present to Quintilian his master,

towards the portion of his daughter on her marriage, and assisted Martial when he retired from Rome. Of these two friends, the latter was in necessity, and the other was not rich.⁸

He had given his nurse a small estate in land, which at the time he gave it her, was worth an hundred thousand sesterces, or about six hundred pounds. What great lords of modern date act in this manner? Pliny, however, calls this a little present: *Manusculum*. And after bestowing this piece of land, we find him make his nurse's income from it his care. He writes to the person who had the care of it, to recommend the improvement of it to him. "For," adds he, "she who received this little farm, has not more interest in its produce, than I who gave it her."

Seeing Calvina, whom he had partly portioned out of his own fortune, upon the point of renouncing the inheritance of her father Calvina's estate, through fear that it was not sufficient to discharge his debts to Pliny, he wrote to her not to affront her father's memory in that manner, and to determine her, sent her a general acquittance.⁹

Upon another occasion he gave Romanus three hundred thousand sesterces (almost nineteen hundred pounds) to purchase him the estate necessary to qualify him for being admitted into the order of Roman knights.¹⁰

Corellia, the sister of Corellius Rufus, for whom Pliny had always a great respect during his life, bought lands of him at the price of seven hundred thousand sesterces. Upon better information she found those lands worth nine hundred thousand, and pressed him earnestly to take the overplus, but could not prevail upon him to do so.¹¹ Fine contest this between justice and generosity, in which the buyer's delicacy and the seller's noble disinterestedness are equally admirable! Where shall we find such behaviour now?

Some merchants had purchased his vintage at a very reasonable price, from the hopes of gaining considerably by it. They were disappointed; and he returned money to them all. The reason he gives for it is still more admirable than the thing itself. "I think it no less noble to do justice in one's own house, than from the tribunal; in small than great affairs; and in one's own, as well as in those of other people."¹²

What he did for his country still exceeds every thing I have said hitherto.¹³ The inhab-

1 Cicero.

2 Ep. vii. l. 3.

3 Scribebat carmina majore cura quam ingenio.

4 Volo eum, qui sit verè liberalis, tribuere patriæ, propinquis, affinibus, amicis, sed amicis pauperibus. Ep. xxx. l. 9.

5 Ep. iii. l. 6.

6 Ep. iv. l. 2.

7 Ep. xix. l. 1.

8 Ep. xiv. l. 7.

9 Mibi egregium inprimis videtur, ut foris ita domi, ut in magnis ita in parvis, ut in alienis ita in suis, agitare justitiam. Ep. ii. l. 8.

10 Ep. xiii. l. 4.

tants of Coma, not having any masters among them for the education of their children, were obliged to send them to other cities. Pliny, who had the heart both of a son and a father for his country, made the inhabitants sensible of the advantages that would attend the education of their youth at Coma itself. "Where," says he to their parents, "can they have a more agreeable residence than their country? where form their manners with more safety, than in the sight of their fathers and mothers? and where will their expenses be less than at home? Is it not best for your children to receive their education in the same place where they had their birth, and to accustom themselves from their infancy to love to reside in their native country?"¹¹ He offered to contribute one third towards a foundation for the subsistence of masters, and thought it necessary to leave the rest of the expense upon the parents, in order to render them the more attentive in choosing good teachers from the necessity of the contribution, and the interest they would have in seeing their expense well bestowed. He did not confine himself to this donation.¹² For as he says elsewhere, liberality once on foot knows not how or where to stop, and has still the more charms the more we use it.¹³ He founded a library there, with annual pensions for a certain number of young persons of family, whose fortunes did not afford them the necessary supplies for study. He had accompanied the institution of this library with a discourse, which he pronounced in the presence only of the principal citizens. He afterwards deliberated whether he should publish it. "It is hard," says he, "to speak of one's own actions without giving reason to judge that we do not speak of them merely because we did them, but did them for the sake of speaking of them. As for me, I do not forget that a great soul is far more affected with the secret reports of conscience, than the most advantageous ones of common fame. Our actions ought not to follow glory, but glory them; and if through the caprice of fortune they do not find it, we ought not to believe, that what has deserved it, loses any thing of its value."¹⁴

It is not easy to comprehend how a private person was capable of so many liberalities. This he explains himself in a letter to a lady, to whom he had made a considerable remittance. "Do not fear," says he, "that such a present will distress me: pray make yourself easy upon that head. My fortune indeed is not large. My rank requires expense, and my income, from the nature of my estate, is no less casual than moderate. But what I want on that side, I find in frugality; the most assured source of my liberality." *Quod cessat ex reducta, frugalitate suppletur: ex qua, velut e fonte, liberalitas nostra decurrit.* What a lesson and at the same time what a reproach is this to those young noblemen, who with immense estates, do no good to any body, and often die much in debt.¹⁵ They are lavish to prodigality upon luxury and pleasures, but close and cruel to insensibility to their friends and domestics. "Ever remember," says Pliny, speaking to a young man of distinction, "that nothing is more to be avoided, than that monstrous mixture of avarice and prodigality, which prevails so much in our times; and that, if one of these vices suffice to blast a person's reputation, both of them must disgrace him much more."¹⁶

IV. Pliny's Innocent Pleasures.

Pliny's disposition was not rigid and austere. On the contrary he was extremely facetious, and took pleasure in conversing gaily with his friends. *Aliquando rideo, joco, ludo: utque omnia innoxia remissionis genera complectar, homo sum.*¹⁷

He was very glad to see his friends at his table, and often gave and accepted entertainments, but such of which temperance, conversation, and reading, made the principal part. "I shall come to supper with you," says he to a friend, "upon condition, however, that we have nothing but what is plain and frugal, except only conversation in abundance after the manner of Socrates; and not much either even of that."¹⁸

He reproaches another¹⁹ with not having kept his promise with him. "On my word you shall hear of it. You put me to the expense of providing a supper for you, and do not come to

11 Ubi aut jucundius morarentur, quam in patria; aut pudicius continerentur, quam sub oculis parentum; aut minore sumptu, quam domi?—Edocentur hic, qui hic nascuntur, statimque ab infantia natale solum amare, frequentare consueant.

12 Ep. viii. l. 1.

13 Nescit enim semel incitata liberalitas stare, cujus pulcritudinem usus ipse commendat. *Epist.* xii. l. 5.

14 Meminimus, quanto majore animo honestatis fructus in conscientia, quam in fama, reponatur. Sequi enim gloria, non appeti debet; nec, si casu aliquo non sequatur, idcirco quod gloriam non meruit, minus pulcrum est. Il vero qui beneficia sua verbis adornant, non ideo prædicare quia fecerint, sed ut prædicarent fecisse creduntur.

15 Ep. iv. l. 2.

16 Memento nihil magis esse vitandum, quam istam luxuriæ et sordium novam societatem: que cum sint turpissima discreta ac separata, turpius junguntur. *Ep.* vi. l. 2.

17 Ep. lii. l. 5.

18 Veniam ad coenam: sed jam nunc paciscor, sit expedita, sit parca, Socraticis tantum sermonibus abundet: in his quoque teneat modum. *Ep.* xii. l. 3.

19 Ep. xv. l. 1.

it. Justice is to be had at Rome. You shall pay me to the last farthing, which is more perhaps than you imagine. I had got each of us a lettuce, three snails, two eggs, a cake, with muscadell wine and ice. Besides which we had Spanish olives, gourds, shalots, and a thousand other meats to the full as delicious. But you were better pleased, at I know not who's, with oysters, sow's belly stuffed, and scarce fish. I shall certainly punish you for it."

He describes one of his parties of hunting¹ with all the wit and pleasantry imaginable. "I know you will laugh, and consent that you do laugh as much as you please. That very Pliny, whom you know, has caught three wild bears; and very large ones too. What himself, say you? Himself. Do not believe, however, that they cost my indolence much. I sat down near the nets: I had neither spear nor dart by me, but I had my book and a pen: I meditated, wrote, and in case of my going home with my hands empty, had provided myself with the consolation of having my leaves full."²

Hence we see study was his darling passion. That taste followed him universally, at table, in hunting, and wherever he went. He employed in it all the intervals of time, which were not passed in the service of the public: for he had laid it down to himself as a law, always to give business the preference to pleasure, and the solid to the agreeable.³ This made him desire leisure and retirement so ardently. "Shall I never then," cried he, when oppressed by a multiplicity of affairs, "be able to break the shackles with which I am hampered, since I cannot unwind them? No, I dare not flatter myself with that. Every day some new care augments my old ones. One business is no sooner at an end than another rises up. The chains of my occupation are perpetually multiplying and growing more heavy."⁴

In writing to a friend,⁵ who employed his leisure like a wise man in a delightful retirement, he could not avoid envying him. "It is thus," says he, "that a person no less distinguished in the functions of the magistrate, than the command of armies, and who has devoted himself to the service of the commonwealth as long as honour required it, ought to pass his age. We owe our first and second stage of life

to our country, but the last to ourselves. Thus the laws seem to advise us, in granting us our quietus at sixty. When shall I be at liberty to enjoy rest? At what age shall I be permitted to imitate so glorious a retirement: and when will it be possible for mine not to be called sloth, but honourable leisure?"⁶

He never thought he lived or breathed, but when he could steal from the town to one of his country houses, for he had several. His agreeable description of them sufficiently shows the pleasure he took in them. He speaks of his orchards, his kitchen, and pleasure gardens, his buildings, and especially of the places that were in a manner the work of his own hands, with that joy and satisfaction which every man feels who builds or plants in the country. He calls these places his delights, his loves, his real loves: *amores mei, re vera amores: ipse possui.*⁷ And in another place: *præterea indulsi amori meo; amo enim quæ maxima ex parte ipse inchoavi, aut inchoata percolui.*⁸ "Am I in the wrong," says he to one of his friends, "for being so fond of this retreat; for making it my joy, and for staying so long at it?" And in another letter: "Here are neither the offensive, nor the impertinent. All here is calm, all peace: and as the goodness of the climate makes the sky more serene, and the air more pure, my body is in better health, and my mind more free and vigorous. The one I exercise in hunting, and the other in study."

Pliny's Ardour for Reputation and Glory.

It is not to be doubted but that glory was the soul of Pliny's virtues. His application, leisure, diversions, studies, all tended that way. It was a maxim with him, that the only ambition which suited an honest man, was either to do things worthy of being written, or to write things worthy of being read.⁹ He did not deny, that the love of glory was his darling passion. "Every body judges differently of human happiness."¹⁰ For my part, I think no man so happy as he who enjoys a great and solid reputation; and who, assured of the voices of posterity, tastes beforehand all the glory it intends him. Nothing affects me so much," says he, "as the desire of surviving long

1 Ep. vi. l. 1.

2 Ut si manus vacuas, plenas tamen ceras reportarem.

3 Hunc ordinem secutus sum, ut necessitates voluptatibus, seria jucundis antefeream. Ep. xxi. l. 8.

4 Nunquam-ne hos arctissimos laqueos, si solvere negatur, abrumpam? Nunquam, puto. Nam veteribus negotiis nova accrescunt, nec tamen priora peraguntur: tot nexibus, tot quasi catenis majus in dies occupationum agmen extenditur. Ep. viii. l. 2.

5 Ep. xxiii. l. 4.

6 Nam et prima vitæ tempora et media patriæ, extremis nobis impertiri debemus, ut ipsæ leges monent, quæ majorem annis sexaginta otio reddunt.

7 Ep. xvii. l. 2.

8 Ep. vi. l. 5.

9 Equidem beatos puto, quibus decorum munere datum est aut facere scribenda, aut scribere legenda. Ep. xvi. l. 6.

10 Alius alium, ego beatissimum existimo, qui bonæ mansuræque famæ præsumptione perfruitur, certusque posteritatis cum futura gloria vivit.

in the remembrance of mankind; a disposition truly worthy of a man, and especially of one, who having nothing to reproach himself with, does not fear the judgment of posterity."¹¹ The celebrated Thrasea used to say, that an orator ought to charge himself with three kinds of causes: those of his friends, those who want protection, and those of which the consequences may be of an exemplary nature—"I shall add to these three kinds," says Pliny again, "perhaps as a man not without ambition, great and famous causes. For it is just to plead sometimes for reputation and glory, that is to say, to plead one's own cause."¹²

He passionately desired that Tacitus would write his history:¹³ but, less vain than Cicero, he did not ask him to embellish it with lies: *mendaciunculis aspergere*. "My actions," says he to that historian, "will in your hands become more great, remarkable, and shining. I do not, however, desire you to exaggerate them: for I know, that history ought never to depart from truth, and that truth does sufficient honour to good actions."¹⁴ I do not know whether I had reason for saying, that Pliny was less vain than Cicero, and whether Cicero ought not to be deemed the more modest, because the more sincere. He knew what he wanted, and asked an officious supplement of that. But Pliny does not believe he has occasion either for favour or aid. He is more satisfied with his own merit. It is sufficiently great, solid, and noble, to support itself alone for the view of posterity. It has no occasion for any thing, besides an elevation of style, to convey the simple truth down to future ages without any foreign addition.

Pliny often assembled a number of his select friends, in order to read his compositions either in verse or prose to them. He declares in several letters, that he did this with the view of making use of their advice; which might be: but the desire of being praised and admired had a great share in it, for he was very sensible in that point. "I represent to myself already the crowd of hearers,"¹⁵ (he speaks to a friend

whom he advises to read his works in the same manner) "the transports of admiration, the applauses, and even that silence, which, while I speak in public, or read my compositions, is scarce less charming than the loudest applauses, when it proceeds solely from attention, and an impatient desire of hearing what remains."¹⁶

He was highly offended at the rude and supercilious behaviour of some hearers, when it concerned his friends.¹⁷ "An excellent work was read in an assembly, to which I was invited. Two or three persons, who conceived themselves better judges than all the rest of us, heard it as if they had been deaf and dumb. They never opened their lips, made the least motion, or so much as rose up, unless it was when they were weary of sitting. What contradiction, or rather what folly was this, to pass a whole day in mortifying a man, to whose house they came only to express friendship and esteem for him!"¹⁸

He did noble actions; but was well pleased that they should be known, and himself praised for them. "I do not deny," says he, "that I am not so wise, as to be indifferent to that kind of reward, which virtue finds in the testimony and approbation of many."¹⁹

Pliny is censured for speaking often of himself, but he cannot be reproached with speaking only of himself. No man ever took more pleasure in extolling the merit of others; which he carried so far as to occasion his being accused of praising to excess, a fault against which he was very far either from defending himself, or being willing to correct.²⁰ "You tell me, that I am reproached by some people with praising my friends to excess upon all occasions. I confess my crime, and glory in it. For can there be any thing more generous, than to err through such an indulgence of one's self? And pray who are these people, who believe they know my friends better than I do? Granted they do, wherefore do they envy me so grateful an error? For suppose my friends are not what I say, I am always happy in believing they are. Let me therefore advise these censurers to apply their malignant delicacy to those who believe there is wit and judgment in criticising their friends: as for me, they shall never persuade me, that I love mine too well."

Have I not expiated too far upon Pliny's

11 Mi nihil æquè ac diuturnitatis amor et cupido sollicitat: res homine dignissima, præsertim qui nullius sibi conscius culpæ, posteritatis memoriam non reformidet.

12 Ad hæc ego genera causarum, ambitiosè fortasse, addam tamen claras et illustres. Equum enim esse agere nonnunquam gloriæ et famæ, id est suam causam.

13 Ep. xxxii. l. 7.

14 Hæc, utcumque se habent, notiora, clariora, majora tu facies: quanquam non exigo ut excedas actû rei modum. Nam nec historia debet egredi veritatem, et honestè factis veritas sufficit.

15 Imaginor qui concursus, quæ admiratio te, qui clamor, quod etiam silentium maneat: quo ego, cum dico vel recito, non minus quam clamore delector, sit modò silentium acre, et intentum, et cupidum ulteriora audiendi.

16 Ep. x. l. 2.

17 Ep. xvii. l. 4.

18 Quæ sinisteritas, ac potius amentia, in hoc totum diem impendere, ut offendas, ut inimicum relinquo, ad quem tanquam amicissimus venera.

19 Neque enim sum tam sapiens, ut nihil mea intersit, an his quæ honestè fecisse me credo testificatio quidam et quasi præmium accedat. Ep. l. l. 5.

20 Ep. xxviii. l. 7.

private character, and will not the extracts I have made from his letters, appear to the reader too long and abundant? I am afraid they will, and confess my weakness. These characters of integrity, probity, generosity, love of public good, which, to the misfortune of our age, are become so rare, transport me out of myself, ravish my admiration, and make me incapable of abridging my descriptions of them. And indeed, I repeat it again, is there a more gentle, desirable, social, and amiable character, in every respect, than that of which I have been endeavouring so long to give some idea? How agreeable is the intercourse of life with such friends; and how happy is it for the public, when such beneficent persons as Pliny, void of capricious humour, passion, and prejudice, fill the first offices of a state, and make it their study to soften and remove the distresses of those with whom they have to do?

I was wrong in saying that Pliny was void of passion. Exempt as he was from such, as in the judgment of the world dishonour men, he had one, less gross and more delicate indeed, but not less warm and vicious in the sight of the Supreme Judge, whatever endeavours the general corruption of the human heart may make to ennoble it, by giving it almost the name of virtue:—I mean, that excessive love of glory, which was the soul of all his actions and undertakings. Pliny and all the rest of the illustrious writers of the pagan world, were solely engrossed by the desire and care of living in the remembrance of posterity, and of transmitting their names to future ages by writings, which they were in hopes would endure as long as the world, and obtain them a kind of immortality, with which they were blind enough to content themselves. Could any thing be more uncertain, precarious, and frivolous, than this hope? Could not time, which has abolished the greatest part of the works of these vain men, have also abolished the little that remains of them? To what are they indebted for the fragments of them that have escaped the general shipwreck? The little of theirs come down to us, does it prevent all that belongs to them, even their very names, from having perished totally throughout all Africa, Asia, and great part of Europe? Had it not been for the studies kept up by the Christian church, would not barbarism have annihilated their works and names throughout the universe? How vain, how trifling then is the felicity, upon which they relied, and to which they wholly devoted themselves! Have not those, who were the admiration of their own times, fallen into the abyss of death and oblivion, as well as the most ignorant and stupid? We, whom religion has better instructed, should be very blind and void of reason, if, destined by the grace of our Saviour to a blessed immortality,

we suffered ourselves to be dazzled by imaginary greatness, and the phantom of an eternity in idea.

The extracts I have made from his letters, are more than sufficient to make the reader acquainted with his genius and manners: it remains for me to give an idea of his style by some extracts from his panegyric upon Trajan, which is an extremely elaborate piece of eloquence, and has always been considered as his masterpiece.

Panegyric upon Trajan.

I have already observed, that Pliny, after his being appointed consul by Trajan, in conjunction with Cornutus Tertullus his intimate friend, received the senate's orders to make that prince's panegyric in the name of the whole empire. He addresses his discourse always to the emperor, as if present. If he were really so, for it is doubted, it must have cost his modesty a great deal: but whatever repugnance he might have to hearing himself praised to his face, which is always very disagreeable, he did not think it proper to oppose the decree of so venerable an assembly. It is easy to judge that Pliny, on that occasion, exerted all his faculties; to which no doubt the warmth of his gratitude added new force. Some extracts, which I am going to make from that piece, will at the same time show the eloquence of its author, and the admirable qualities of the prince it praises.

General praise of Trajan.

"Sæpe ego mecum, patres conscripti, tacitus agitavi, qualem quantumque esse oporteret cujus ditione natusque maria, terre, pax, bella, regerentur: cum interea fingenti formantique mihi principem, quem æquata diis immortalibus potestas deceret, nunquam voto saltem concipere succurrit similem huic quem videmus. Enituit aliquis in bello, sed obsolevit in pace. Alium toga, sed non et arma honestarunt. Reverentiam ille terrore, alius amorem humanitate captavit. Ille quesitam domi gloriam, in publico; hic in publico partam, domi perdidit. Postremo, adhuc nemo extitit, cujus virtutes nullo vitorum confinio læderentur. At principi nostro quanta concordia quantusque concentus omnium laudum omnisque gloriæ contigit; ut nihil severitati ejus hilaritate, nihil gravitati simplicitate, nihil majestati humanitate detraheretur! Jam firmitas, jam proceritas corporis, jam honor capitis, et dignitas oris, ad hoc ætatis inflexa maturitas, nec sine quodam munere deum festinatis senectutis insignibus ad augendam majestatem ornata cesaries, nonne longè latèque principem ostentant?"

"I have often endeavoured, fathers, to form

to myself an idea of the great qualities which a person worthy of ruling the universe absolutely by sea and land, in peace and war, ought to have; and I confess, that when I have imagined, according to my best discretion, a prince capable of sustaining with honour a power comparable to that of the gods, my utmost wishes have never rose so high, as even to conceive one like him we now see. Some have acquired glory in war, but lost it in peace. The gown has given others fame, but the sword disgrace.¹ Some have made themselves respected by terror, and others beloved by humanity. Some have known how to conciliate esteem in their own houses, but not to preserve it in public; and some to merit reputation in public, which they have ill sustained at home. In a word, we have seen none hitherto, whose virtues have not suffered some alloy from the neighbouring vices. But in our prince, what an assemblage of all excellent qualities, what an union of every kind of glory, do we not behold; his severity losing nothing by his cheerfulness, his gravity by the simplicity of his manners, nor the majesty of his power and person by the humanity of his temper and actions! The strength and gracefulness of his body, the elegance of his features, the dignity of his aspect, the healthy vigour of his maturer years, his hoary hair, which the gods seem to have made white before the time only to render him the more venerable; do they not all combine to point out, to speak, the sovereign of the world?"

Trajan's Conduct in the Army.

" Quid cū solatium fessis militibus, agris opem ferres? Non tibi moris tua inire tentoria, nisi commilitonum ante lustrasses; nec requiem corpori, nisi post omnes, dare. Hac mihi admiratione dignus imperator non videretur, si inter Fabricios, et Scipiones, et Camillos talis esset. Tunc enim illum imitationis ardor, semperque melior aliquis accenderet. Postquam vero studium armorum à manibus ad oculos, ad voluptatem à labore translatus est, quam magnum est unum ex omnibus patrio more, patria virtute lætari, et sine æmulo ac sine exemplo secum certare, secum contendere: ac, sicut imperat solus, solum ita esse qui debeat imperare!"

" In your care of the tired and wounded soldiers, in which none ever were more attentive, was it your custom to retire to your own tent, till after having visited all the rest, or to take repose, till you had first provided for that of the whole army? To find such a general amongst the Fabricii, the Scipios, the Camilli,

would seem no great matter of admiration. In those days there was always some great example, some superior, to quicken such ardour, and to kindle in the soul a noble emulation. But now, when we love arms only in the shows of the circus, and have transferred them from the hand to the eye, from fatigue and toil to pastime and amusement, how glorious is it to be the only one in retaining the ancient manners and virtues of his country, and to have no other model to propose, no other rival to contend with, but himself; and, as he reigns alone, to be the only person worthy of reigning!"

" Veniet tempus quo posteri visere, visendum tradere minoribus suis gestient, quis sudores tuos hauserit campus, quæ refectationes tuas arbores, quæ somnum saxa prætexerint, quod denique tectum magnus hospes impleveris, ut tunc ipsi tibi ingentium ducum sacra vestigia iisdem in locis monstrabantur."

" The time will come, when posterity will eagerly visit themselves, and show to their children, the plains where you sustained such glorious labours, the trees under which you refreshed yourself with food, the rocks where you slept, and the houses that were honoured with so great a guest: in a word, they will trace your sacred footsteps everywhere, as you have done those in the same places of the great captains you delight so much to contemplate."

" Itaque perinde summis atque infimis carus, sic imperatorem commilitonemque miscueras, ut studium omnium laboremque et tanquam particeps sociusque elevaras. Felices illos, quorum fides et industria, non per nuncios et interpretes, sed ab ipso te, nec auribus tuis sed oculis probantur. Consecuti sunt, ut absens quoque de absentibus nemini magis, quam tibi, crederes."

" Dear as you were alike to great and small, you mingled the soldier and general in such a manner, that at the same time your office exacted their whole obedience and labours as their leader, you softened their toils by sharing in them as their companion. How happy are they to serve you, who are not informed of their zeal and capacity from the reports of others, but are yourself the witness of them in your own person. Hence to their good fortune, even when absent, you rely on none more than yourself in what relates to them."

Trajan's return and entrance into Rome, after his being declared Emperor.

" Ac primum qui dies ille, quo expectatus desideratusque urbem tuam ingressus es!—Non ætas quemquam, non valetudo, non sexus retardavit quominus oculos insolito spectaculo expleret. To parvuli noscere, ostentare juvenes, mirari senes, ægri quoque neglecto medietum imperio ad conspectum tui, tanquam ad salutem

1 At Rome the princes exercised the functions both of magistrates and generals.

sanitatemque, prorere. Inde alii se satis vixisse te viso, te recepto: alii nunc magis vivendum prædicabant. Fæminas etiam tunc fœcunditatis suæ maxima voluptas subiit, cum cernerent cui principi cives, cui imperatori milites peperissent. Viderem referta tecta ac laborantia, ac ne eum quidem vacantem locum, qui non nisi suspensum et instabile vestigium caperet. Oppletas undique vias, angustumque tramitem relictum tibi: alacrem hinc atque inde populum: ubique par gaudium, paremque clamorem."

"What shall I say of that day, when your city, after having so long desired and expected you, beheld you enter it?—Neither age, sex, nor health could keep any body from so unusual a sight. The children were eager to know you, the youth to point you out, the old to admire you, and even the sick, without regard to the orders of their physicians, crept out, as if for the recovery of their health, to feed their eyes on you. Some said, that they had lived long enough, since they had seen you; and others that they only now began to live. The women rejoiced that they had children, when they saw for what prince they had brought forth citizens, for what general, soldiers. The roofs were all crowded and ready to break down under the numbers upon them; the very places where there was scarce room to stand and not upright, were full. The throng was so vast in the streets, that it scarce left you way to pass through it: while the joy and acclamations of the people filled all places, and resounded universally to the heavens."

The Example of the Prince how Powerful.

"Non censuram adhuc, non præfecturam morum recepiſti; quia tibi beneficiis potius quam remediis ingenia nostra experiri placet. Et alloqui nescio an plus moribus conferat princeps, qui bonos esse patitur, quam qui cogit. Flexibiles quæcumque in partem ducimur à principe, atque ut ita dicam, sequaces sumus—Vita principis censura est, eaque perpetua: ad hanc dirigimur, ad hanc convertimur; nec tam imperio nobis opus est, quam exemplo. Quippe infidelis recti magister est metus. Melius homines exemplis docentur, quæ inprimis hoc in se boni habent, quod approbant quæ præcipiunt, fieri posse."

"You have not yet thought fit to take the censorship upon you, nor to charge yourself with inspecting the manners of the people; because you choose rather to try our disposition by kindness and indulgence, than bitter remedies. And indeed, I do not know whether the prince, who honours the virtues of his people, does not contribute more to them, than he who exacts them with rigour.—The life of a prince is a continual censorship: it is to that we adapt ourselves, to that we turn as to our model; and want less

his commands than his example. For fear is but a dubious, a treacherous teacher of duty. Examples are of much greater efficacy with men: for they not only direct to virtue, but prove that it is not impossible to practise what they admonish."

Virtue, not Statues, do Honour to Princes.

"Ibit in secula fuisse principem, cui florenti et incolumi nunquam nisi modici honores, sæpius nulli decernerentur.—Ac mihi intuenti in sapientiam tuam, minus mirum videtur, quod mortales istos caducosque titulos aut deprecæris, aut temperes. Scis enim ubi vera principia, ubi sempiterna sit gloria; ubi sint honores, in quos nihil flammis, nihil senectuti, nihil successoribus liceat. Arcus enim, et statuas, aras etiam templaque demolitur et obscurat oblivio, negligit carpitque posteritas: contrà, contemptor ambitionis et infinitæ potestatis domitor ac frænator animus ipsa vetustate florescit, nec ab ullis magis laudatur, quam quibus minimè necesse est. Præterea, ut quisquis factus est princeps, extemplo fama ejus, incertum bona an mala, cæterum æterna est. Non ergo perpetua principi fama, quæ invitum manet, sed bona concupiscenda est. Ea porro non imaginibus et statuâ, sed virtute ac meritis propagatur."

"It will be told in all ages, that there was a prince to whom in the height of glory and good fortune only moderate honours, and more frequently none were decreed.—When I consider your profound wisdom, my wonder ceases, on seeing you either decline or moderate these fleeting vulgar titles. You know wherein the true, the immortal glory of a prince consists; you know wherein these honours have their being, which fear neither flames, time, nor the envy of successors. For neither triumphal arches, statues, altars, nor even temples escape oblivion, and the neglect or injuries of posterity. But he, whose exalted soul disdains ambition, and sets due bounds to universal power, shall flourish to the latest period of the world, revered and praised by none so much, as those who are most at liberty to dispense with that homage. The fame of a prince, from the moment he becomes so, whether good or bad, is necessarily eternal. He ought not therefore to desire an immortal name, which he must have whether he will or not, but a good one; and that, not statues and images, but merit and virtue perpetuate."

The Prince's Happiness inseparable from that of the People.

"Fuit tempus, ac nimium diu fuit, quo alia adversa, alia secunda principi et nobis. Nunc communia tibi nobiscum tam læta, quam tristia;

nec magis sine te nos esse felices, quam tu sine nobis potes. An, si posses, in fine votorum, adiecisses, ut ita precibus tuis dii annuerent, si iudicium nostrum mereri perseverasses?"

"There was a time, and but of too long duration, when our misfortunes and prosperity and the prince's were the reverse of each other. But now our good and evil are one and the same with yours; and we can no more be happy without you, than you without us. Had it been otherwise, would you have added at the end of your public vows, 'That you desired the gods would hear your prayers no longer, than you continued to deserve our love?'"

It is remarkable that a condition was inserted by the order of Trajan himself in the vows made for him by the public: *Si bene rempublicam et ex utilitate omnium rezeris*: that is, "if you govern the commonwealth with justice, and make the good of all mankind the rule of your power." "O vows," cries Pliny, "worthy of being made, worthy of being eternally heard! The commonwealth has, by your guidance, entered into a contract with the gods, that they should be watchful for your preservation, as long as you are so for that of your country: and if you act any thing to the contrary, that they should withdraw their regard and protection from you." "Digna vota, quæ semper suscipiuntur, semperque solvantur. Egit cum diis, ipso te auctore, Respublica, ut te sospitem incolumemque præstarent, si tu cæteros prestitisses: si contra, illi quoque à custodia tui corporis oculos dimoverent."

Admirable Union between the Wife and Sister of Trajan.

"Nihil est tam primum ad similitudines quàm æmulatio, in fœminis præsertim. Ea porro maximè nascitur ex conjunctione, aliter æqualitate, exardescit invidia, cuius finis est odium. Quo quidem admirabilibus existimandum est, quòd mulieribus duabus in una domo parique fortuna nullum certamen, nulla contentio est. Suspiciunt invicem, invicem cedunt: cùmque te utraque effusissimè diligit, nihil sua putant interesse utram tu magis ames. Idem utrique propositum, idem tenor vitæ, nihilque ex quo sentias duas esse."

"Nothing is more apt to produce enmity than emulation, especially among women. It generally is most frequent where it should least be found, I mean in families: equality nourishes it, envy inflames it, the end of which is implacable hatred. And this makes our wonder the greater, when we behold two ladies, equal in fortune, in the same palace, between whom there never happens the least difference. They seem to contend in paying respect and giving place to each other; and though they both love

you with the utmost tenderness, they do not think which of them you love best of any consequence. Their views, the tenor of their lives, are so much the same, that there is nothing in either from which one can distinguish them to be two persons."

Trajan was sensible to the Joys of Friendship.

"Jam etiam et in privatorum animis exoleverat priscum mortalium bonum amicitia, cujus in locum migraverant assentationes, blanditiæ, et pejor odio amoris simulatio. Etenim in principum domo nomen tantum amicitia, inane scilicet irrissumque, manebat. Nam quæ poterat esse inter eos amicitia, quorum sibi alii domini, alii servi videbantur? Tu hanc pulsam et errantem reduxisti. Habes amicos, quia amicus ipse es. Neque enim, ut alia subjectis, ita amor imperatur: neque est ullus affectus tam erectus, et liber, et dominationis impatiens, nec qui magis vices exigat."

"Friendship, that inestimable good, in which of old the happiness of mortals consisted, was banished even from the commerce of private life; and flattery, compliment, and outward profession, the phantom of friendship more dangerous even than enmity, had assumed its place. If the name of friendship was still known in the court of princes, it was only as the object of contempt and ridicule. For what friendship could subsist between those, who considered each other in the light of masters and slaves? But you have recalled the exile from wandering abroad: you have friends, because you are yourself a friend. For the power of a prince, though he commands without bounds in other things, does not extend to love. Of all the affections of the soul, that is the most free, unbiassed, and averse to constraint; none of them exacting returns with greater rigour."

Absolute Power of the Freedmen under the bad Emperors.

"Plerique principes, cum essent civium domini, libertorum erant servi. Horum consilia, horum nutu regebantur: per hos audiebant, per hos loquebantur: per hos præturæ etiam, et sacerdotia, et consulatus, imò et ab his, petebantur. Tu libertis tuis summum quidem honorem, sed tanquam libertis, habes; abundeque his sufficere credis, si probi et frugi existimentur. Scis enim, præcipuum esse indicium non magni principis, magnos libertos."

"Most of our emperors while lords of the citizens, were slaves to their freedmen. They governed solely by their counsel and dictates; and had neither will, ears, nor tongues but theirs. By them, or rather from them, all offices, prætor, pontifex, consul, were to be

asked. As for you, you have indeed a very high regard for your freedmen, but you regard them as freedmen, and believe them sufficiently honoured in the circumstances of worthy men of moderate fortune. For you know, that there is not a more infallible proof of the prince's meanness, than the greatness of his freedmen."

Nothing Exalts the Prince like descending to the Man.

"Cui nihil ad augendum fastigium superest, hic uno modo crescere potest, si se ipse submittat, securus magnitudinis sum. Neque enim ab ullo periculo fortuna principum longius abest, quam ab humilitate."

"To him who has attained the highest fortune, there remains but one manner of exalting himself, and that is, secure in his greatness, to neglect and descend from it properly. Of all the dangers princes can incur, the least they have to fear, is making themselves cheap by humility."

In what the Greatness of Princes Consists.

"Ut felicitatis est quantum velis posse, sic magnitudinis velle quantum possis."

"As it is the highest felicity to be capable of doing all the good you will, so it is the most exalted greatness to desire to do all the good you can."

Of Pliny's Style.

Pliny's panegyric has always passed for his masterpiece, and even in his own time, when many of his pieces of eloquence that had acquired him great reputation at the bar, were extant. In praising as consul and by order of the senate so accomplished a prince as Trajan, to whose favour he was besides highly indebted, it is not to be wondered that he made an extraordinary effort of genius, as well to express his private gratitude, as the universal joy of the empire. His genius shines out everywhere in this discourse; but his heart is still more evident in it; and all know that true eloquence flows from the heart.¹

When he spoke this panegyric, it was not so long as it is at present.² It was not till after the first essay, that like an able painter, he added new strokes of art to the portrait of his hero; but all taken from the life, and which far from altering the likeness and truth, only rendered them stronger and more sensible. He gives us himself the reason that induced him to act in

this manner.³ "My first view," says he, "was to make the emperor (if possible) more in love with his own virtues, by the charms of just and natural praises; and next to point out to his successors, not as a master, but under the cover of example, the most certain paths to solid glory. For though it be laudable to form princes by precepts, it is difficult, not to my proud and assuming. But to transmit the praises of a most excellent prince to posterity, is setting up a light to guide succeeding emperors, and to the full as useful, with no arrogance." It was not easy for him to have proposed a more perfect model. Trajan may be said to have united all the qualities of a great prince in one only, which was in being perfectly convinced, that he was not emperor for himself, but for his people. But that is not the present question.

The style of his discourse is elegant, florid, and luminous, as that of a panegyric ought to be, in which it is allowable to display with pomp whatever is most shining in eloquence. The thoughts in it are fine, solid, very numerous, and often seem entirely new. The diction, though generally simple enough, has nothing low, or that does not suit the subject, and support its dignity. The descriptions are lively, natural, circumstantial, and full of happy images, which set the object before the eyes, and render it sensible. The whole piece abounds with maxims and sentiments truly worthy of the prince it praises. As fine and eloquent as this discourse is, it cannot however in my opinion be judged of the sublime kind. We do not see in it, as in Cicero's orations, even of the demonstrative kind, those warm and emphatic expressions, noble and sublime thoughts, bold and affecting turns and sallies, and figures full of vivacity and fire, which surprise, astonish, and transport the soul out of itself. His eloquence does not resemble those great rivers, that roll their waves with noise and majesty, but rather a clear and agreeable stream which flows gently under the shade of the trees that adorn its banks. Pliny leaves his reader perfectly calm, and in his natural situation of mind. He pleases, but by parts and passages. A kind of monotony prevails throughout his whole panegyric, which

3 Officium consulatus injunxit mihi ut Reip. nomine Principi gratias agerem. Quod ego in Senatu cum ad rationem et loci et temporis ex more fecissem, bono civi convenientissimum credidi, eadem illa spatiois et uberioris volumine amplecti. Primum, ut Imperatori nostro virtutes suae veris laudibus commendarentur: deinde ut futuri Principes, non quasi à magistro, sed tamen sub exemplo præmonerentur, quia potissimum via posset ad eandem gloriam niti. Nam præcipere qualis esse debeat Princeps, pulcrum quidem, sed onerosum ac prope superbum est. Laudare verò optimum Principem, ac per hoc posteris, velut à specula, lumen quod sequantur ostendere, idem utilitatis habet, arrogantiae nihil.

1 Pectus est quod disertos facit. Quintil.

2 Ep. xviii. l. 3.

makes it not easy to bear the reading of it to the end ; whereas Cicero's longest oration seems the finest, and gives the most pleasure. To this I must add, that Pliny's style savours a little of the taste for antitheses, broken thoughts, and studied turns of phrase, which prevailed in his time. He did not abandon himself to them, but was obliged in some measure to conform to the reigning taste. The same taste is obvious in his letters, but with less offence, because they are all detached pieces, in which such a style does not displease : I believe them however far from being comparable to those of Cicero. But all things rightly considered, Pliny's letters and panegyric deserve the esteem and approbation all ages have given them ; to which I shall add, that his translator (into French) ought to share them with him.

Ancient Panegyrics.

There is a collection of Latin orations extant, entitled, *Panegyrici veteres*, which contains panegyrics upon several of the Roman emperors. That of Pliny is at the head of them, with eleven of the same kind after it. This collection, besides including many facts not to be found elsewhere, may be of great use to such as have occasion to compose panegyrics. The ancients of a better age supply us with no models of this kind of discourses, except Cicero's oration for the Manilian law, and some parts of his other harangues, which are finished masterpieces of the demonstrative kind. The same beauty and delicacy are not to be expected in the panegyrics of which I am speaking. Remoteness from the Augustan age had occasioned a great decline of eloquence, which no longer retained that ancient purity of language, beauty of expression, sobriety of ornaments, and simple and natural air, that rose when necessary, into an admirable loftiness and sublimity of style. But there is considerable talent, in these discourses, with very fine thoughts, happy turns, lively descriptions, and very just commendations.

To give the reader some idea of them, I shall content myself with transcribing two passages here in Latin only. They are extracted from the panegyric spoken by Nazarius in honour of Constantine the Great, upon the birth-day of the two Cæsars his sons, A. D. 321. St. Jerome mentions this Nazarius as a celebrated orator, and says that he had a daughter no less esteemed than himself for eloquence.

First passage.

Nazarius speaks here of the two Cæsars. "Nobilissimorum Cesarum laudes exequi velle, studium quidem dulce, sed non et cura mediocris est ; quorum in annis pubescentibus non erupturæ virtutis tumens germen, non flos præcursor in-

dolis bonæ lætior quam uberior apparet ; sed jam facta grandifera, et contra rationem ætatis maximorumque fructuum matura perceptio. Quorum alter jam obtrendis hostibus gravis terrorem paternum, quo semper barbaria omnis intremuit, derivare ad nomen suum cæpit : alter jam Consulatum, jam venerationem sui, jam patrem sentiens, si quid intactum aut parens aut frater reseruet, declarat mox victorem futurum, qui animo jam vincit ætatem. Rapitur quippe ad similitudinem suorum excellens quæque natura, nec sensim ac lentè indicium promit boni, cum involucra infantie vividum rumpit ingenium."

Second passage.

Nazarius praises a virtue in Constantine very rarely found in princes, but highly estimable : that is, continence. He adds also several other praises to it.

"Jam illa vix audeo de tanto Principe commemorare, quod nullam matronarum, cui forma emendatior fuerit, boni sui piguit ; cum sub abstinentissimo Imperatore species luculenta, non incitatrix licentiæ esset, sed pudoris ornatrix. Quæ sine dubio magna, seu potius divina laudatio, sæpe et in ipsis etiam philosophis, non tam re exhibita, quam disputatione jactata. Sed remittamus hoc principi nostro, qui ita temperantem ingenerare omnibus cupit, ut eam non ad virtutem suarum decus adscribendam, sed ad naturæ ipsius honestatem referendam arbitretur. Quid, faciles aditus ? quid, aures patientissimas ? quid, benigna responsa ? quid, vultum ipsum augusti decoris gravitate, hilaritate permixta, venerandum quiddam et amabilem renidentem, quis digne exequi possit ?"

Can any thing be stronger than this thought ? "No lady, however beautiful, has had reason to repent her being so ; because under so wise a prince as Constantine, beauty is not an attraction to vice, but the ornament of virtue." And could it be better expressed ? *Cum sub abstinentissimo Imperatore species luculenta, non incitatrix licentiæ esset, sed pudoris ornatrix.*

CHAPTER IV.

OF RHETORICIANS.

Those who made it their profession to teach eloquence, and have written precepts upon it, are called Rhetoricians.

Eloquence is the art of speaking well. One might believe that for the attainment of it, it would suffice to hearken to, and follow the voice of nature. She seems to dictate to us what it is necessary to say, and often even the manner of saying it. Do we not every day see a multitude of persons, who without art or study, and by the pure force of genius, can give order, perspi-

cuity, eloquence, and above all, fine sense to their discourse? What more is wanting. It is true, that without the aid of nature precepts are of no use:¹ but it is as true, that they very much support and strengthen her, in serving her as a rule and guide. Precepts are no more than observations, which have been made upon what was either fine or defective in discourse. For, as Cicero very well observes, eloquence was not the offspring of art, but art of eloquence.² These reflections, reduced to order, formed what is called rhetoric. Now who doubts, but they may be of great service for attaining and improving the talent of speaking.

Quintilian, in the third book of his *Institutiones Oratorie*, enumerates a considerable number of the ancient rhetoricians, as well Greek as Latin. I shall expatiate only upon those, whose names and histories are best known, shall slightly pass over others, and even say nothing of many. Mr. Gibert, who has been professor of rhetoric in the college of Mazarine almost fifty years with great reputation, and has several times filled, and always with the same success, the honourable place of principal in the university of Paris, has composed a work upon the subject I now treat, abounding with erudition, of which, as an old friend, he has given me permission to make all the use I should think fit.

ARTICLE I.

OF THE GREEK RHETORICIANS.

EMPEDOCLES. CORAX. TISIAS.

Empedocles of Agrigentum, a celebrated philosopher, is supposed to be the first that had any knowledge of rhetoric; and Corax and Tisias, both Sicilians, are said to be the first who reduced it to rules.³ They had many disciples, better known under the name of sophists, of whom we shall speak in the sequel.

PLATO.

Though Plato seems to have undertaken to discredit rhetoric, he justly deserves to be ranked in the number of the most excellent rhetoricians, having only censured and ridiculed those who dishonoured this art by the abuse of it, and the bad taste of eloquence they endeavoured to introduce. The solid and judicious reflections,

which we find in several of his dialogues, especially in the *Phædrus* and *Gorgias*, may be considered as a good rhetoric, and contains the most important principles of it.

ARISTOTLE.

Aristotle is acknowledged with reason to be the chief and prince of rhetoricians. His *Rhetoric*, divided into three books, has always been considered by the learned as a masterpiece, and the most consummate treatise that ever appeared upon this subject. We are indebted for this work to its author's jealousy, or rather emulation. Isocrates, at that time very old, taught eloquence at Athens with extraordinary success, and was followed by a great number of illustrious disciples:⁴ I might for that reason have given him a place amongst the rhetoricians, but I defer speaking of him to another title. So shining a reputation alarmed Aristotle. By a happy parody on a verse of a Greek tragedy, he said to himself, "It is a shame for me to keep silence, and let Isocrates speak."

Αἰσχρὸν σιωπῆς, Ἰσοκράτους δὲ ἰσὺς λέγειν.

Till then he had solely taught philosophy; which he continued to do only in the mornings, and opened his school in the afternoon, to teach pupils the precepts of rhetoric.

It appears that Aristotle composed several works upon rhetoric.⁵ Cicero speaks in more than one place of a collection,⁶ in which this philosopher had inserted all the precepts of that art which had appeared from Tisias, whom he considers as the inventor of it, to his own times; and had treated them with such elegance, perspicuity, and order, that people no longer had recourse, to their authors for them, but only to Aristotle.

Immediately after Aristotle's *Rhetoric*, consisting of three books, there is another entitled, *Rhetorica ad Alexandrum*, as addressed to Alex-

⁴ Itaque ipse Aristoteles, cum florere Isocratem nobilitate discipulorum videret—mutavit repente totam formam prope discipline sue, versumque quemdam de Philoctete paulo secus dixit. Illa enim tacere ait sibi esse turpe cum barbaris; hic autem, cum Isocratem pateretur dicere. *De Orat.* l. iii. n. 141.

Isocratis præstantissimi discipuli fuerunt in omni studiorum genere; eoque jam seniore—pomeridianis scholis Aristoteles præcipere artem oratoriam cepit. *Quint.* l. iii. c. 1.

⁵ De Invent. l. ii. n. 6. De Orat. l. ii. n. 160.

⁶ Nominatim cujusque præcepta magna conquista curâ perspicuè conscripsit, atque enodata diligenter exposuit; ac tantum inventioribus ipsis suavitate et brevitate dicendi præstitit, ut nemo illorum præcepta ex ipsorum libris cognoscat; sed omnes, qui, quod illi præcipiant, velint intelligere, ad hunc quasi ad quemdam multo commodiorem explicatorem convertantur. *De Invent.*

¹ Illud in primis testandum est, nihil præcepta atque artes valere nisi adjuvante natura. *Quintil.* l. i. in *Proæm.*

² Non esse eloquentiam ex artificio, sed artificium ex eloquentia natum. l. *De Orat.* n. 146.

Initium dicendi dedit natura; initium artis observatio. *Quintil.* l. iii. c. 2.

³ Quintil. l. iii. c. 1. Cic. in *Brut.* n. 46.

ander, and composed expressly for him. But all the learned agree that it is not Aristotle's. He had composed some books upon this subject in the name of Theodectes. What Valerius Maximus relates on this head, would do no honour to Aristotle, if it were true. He tells us, that, to please Theodectes, one of his disciples, for whom he had a particular regard, he had made him a present of these books, and given him leave to publish them in his own name; but that afterwards repenting his having inconsiderately transferred his glory to another, he declared himself the author of them. Accordingly he cites them as his in his *Rhetoric*.⁷ It continued a doubt to the time of Quintilian,⁸ whether this work was written by Aristotle or Theodectes. However it may be, his *Rhetoric*, which is come down to us, and which nobody disputes being his, is the most generally esteemed of all his works, for its wonderful order, the solidity of the reflections incorporated with the precepts, and the profound knowledge of the human heart, which appears particularly in his treatise upon the manners and passions. Masters whose province it is to teach youth eloquence, cannot study so excellent a book too much. The same may be said of his *Poetics*.

ANAXIMENES.

Anaximenes of Lampsacus is generally taken for the author of the rhetoric addressed to Alexander. It has its merit, but is very much inferior to that of Aristotle. He wrote upon many other subjects.

DIONYSIUS HALICARNASSEUS.

Dionysius Halicarnasseus is of the first rank amongst the historians and rhetoricians. I consider him in this place only under the latter denomination.

Soon after Augustus had terminated the civil wars, about the 187th Olympiad, and twenty-eight years before Jesus Christ, Dionysius of Halicarnasseus came to settle at Rome, where he resided twenty-eight years. It is believed, from some passages in his writings, that he taught rhetoric there either publicly or in private. All that he wrote upon this head is not come down to us. We have a treatise of this author upon "the disposition of words," another upon the *Art*; a third, which is not perfect, "of the characters of the ancient writers," and especially the orators. In the first part he speaks of *Lysius*, *Isocrates*, and *Isæus*; in the second he treated of *Demosthenes*, *Hyperides* and *Æschines*;

nothing remains of it, but what relates to Demosthenes, nor is that fragment entire. He adds also something on Dinarchus. Two letters follow: the one to Ammaeus, wherein he examines "whether Demosthenes formed himself upon Aristotle's rhetoric;" the other to one Pompeius, wherein "he gives an account of what he thinks vicious in Plato's diction." We have still his *comparisons* of Herodotus and Thucydides, Xenophon, Philistus, and Theopompus. And lastly, we have his reflections upon "what forms the peculiar character of Thucydides." The end of these last works is to make known the characters of the authors of whom he speaks, and to show wherein they are and are not imitable. What we have of this author's is not therefore a rhetoric in form, but fragments of rhetoric, or certain points of that art, which he thought fit to treat.

His inquiry into the most celebrated writers of antiquity, and the judgment he passes on them, may be of great use in forming the taste. It is true, we are shocked at first with the liberty he takes in arraigning certain articles of Plato and Thucydides, for whom, in other respects, he professes the highest esteem and regard. It would be very useful, and not disagreeable to the reader, to enter into the exact discussion of his judgments, and to examine, without prejudice, and with attention, whether they are or are not founded in reason and truth. Neither the plan of my work, nor the mediocrity of my talents, admit me to think of such an undertaking. Our author declares in several passages, that it is neither the desire to exalt himself, nor to depreciate others, that guide him in his criticisms, but the sincere intent of being useful to his readers: which is a happy disposition for forming right judgments.

A very short fragment which remains of his, shows us his motive for composing his treatises of rhetoric: this was the desire of contributing to the establishment of good taste in regard to eloquence. From the death of Alexander the Great, king of Macedon, it had suffered great alterations in Greece, and by an imperceptible, but always increasing, decline, it was at last sunk to such an ebb, that it could scarce be known for itself. We shall see in the sequel, that this alteration and decay began by Demetrius Phalereus. Instead of that manly and natural beauty, that noble and ancient simplicity, that air of dignity and grandeur, which had acquired it universal respect and unlimited empire over the minds and passions of mankind; its rival, false eloquence, from the delightful regions of Asia, tacitly laboured to supplant it, made use of paint and glaring colours for that purpose, and assumed such ornaments as were best suited to dazzle the eyes, and illude the mind. This last-comer, with no other merit

⁷ Lib. iii. c. 9. p. 562.

⁸ Quintil. l. ii. c. 13.

than that of a splendid but vain attire, though a stranger, at length established herself in all the cities of Greece, to the exclusion of the other, a native of the country, who saw herself exposed to the oblivion, contempt, and even insults of those, who had formerly so long and so justly admired her. Our author, in this point, compares Greece to a house, wherein a concubine of art and address, by her charms and insinuations, has gained an entire ascendancy over the husband, has introduced disorder and depravity, and governs without control; while the lawful wife, become in some measure a slave, has the affliction to see herself despised and neglected, and is every day reduced to suffer the most sensible affronts and indignities. He observes with joy, that sound eloquence has for some time resumed her ancient credit, and compelled her rival in her turn to give her place. All he says here regards Greece; and he ascribes so happy a change to the good taste which then prevailed at Rome, whence it had already diffused itself, and daily would continue to do so more and more, into all the cities of Greece, that emulated each other in imitating the example of the reigning city. It was to contribute to this revival of eloquence in his country, that Dionysius Halicarnassensis composed all his books upon rhetoric: a laudable motive, and well worthy of a good and zealous citizen.

HERMOGENES.

Hermogenes was a native of Tarsus in Cilicia, and lived in the reign of Marcus Aurelius Antoninus.¹ That prince having had the curiosity to hear his lectures, was charmed with them, and made him great presents. He began to profess rhetoric at the fifteenth year of his age; and was but eighteen when he composed his book upon it, which is esteemed a very good work by the learned. But, by a very singular event, at the age of twenty-four, he became stupid, and continued so during the rest of his life. He died in the beginning of the third century.

APHTHONIUS.

Aphthonius lived about the end of the second age of the church, or the beginning of the third. Instead of writing upon rhetoric, as others had done, only for those who had made some progress in the knowledge and use of that art, in order to perfect them in it; Aphthonius wrote solely for children, his precepts extending no farther than the compositions he believed it

necessary for them to make, to prepare them for what was greatest in eloquence.

LONGINUS.

Dionysius Longinus was a native of Athens, but by descent of Syria. Though he excelled very much in philosophy, Plotinus says, that he was less a philosopher than a man of letters: and indeed it was by the latter particularly he acquired the greatest reputation. He had great erudition, and the most refined, exact, and solid discernment in judging works of wit, and pointing out their beauties and defects.

Of all his works, time has left us only his treatise of the *Sublime*, which is one of the finest fragments of antiquity. We have Mr. Boileau's excellent translation of it, which has more the air of an original than a copy, has made all the world judges of its merit, and has justified the general esteem the learned always had for its author. Cæcilius, who lived in the time of Augustus, had before composed a treatise upon the *Sublime*: but he had contented himself with explaining what it was, without laying down any rules for attaining that sublimity, which does not so much persuade, as ravish and transport the mind of the reader. It is the latter point Longinus undertakes to treat in his work. Among the examples which he gives of this shining and magnificent manner of style, he speaks of Moses in these terms: "The legislator of the Jews, who was no common person, having extremely well conceived the grandeur and power of God, expresses them in all their dignity in the beginning of his laws, in these words: 'God said, Let there be light, and there was light:' Let the earth be, and the earth was."²

Longinus taught Zenobia the Greek language, who espoused the celebrated Odenatus, king of Palmyra, and afterwards emperor of the Romans. It is said,³ that he advised that princess to write the haughty letter she sent the emperor Aurelian, during the siege of Palmyra; and that it was for that reason Aurelian caused him to be put to death.⁴ He suffered that sentence with great fortitude, consoling those who expressed their grief for his destiny.

² In the French the words are, *Que la lumiere se fasse, et la lumiere se fit; Que la terre se fit, elle fut faite.* Mr. Rollin says, there is more energy and sublimity in the Hebrew, which has literally, "*Que la lumiere soit, et la lumiere fut:*" "Let there be light, and there was light;" exactly as in the English version. The word "*faire*," continues he, seems to imply some effort, and a succession of time; whereas the terms, "*Que la lumiere soit, et la lumiere fut:*" "Let there be light, and there was light," express better a rapid obedience to the Lord of Nature's command.

³ Aurel. Vict. in Aurel.

⁴ Zos. l. i.

¹ Philostr. de vit. Sophist. l. ii. p. 575.

DEMETRIUS.

There is a treatise in Greek upon *Elocution*, which, though a very small fragment of rhetoric, is however of sufficient value to do honour to its author, and is ascribed to a person whose name reflects no less honour upon the work: this is the famous Demetrius Phalereus, so called from the Athenian port Phalerus, where he was born. The critics do not however entirely agree that this work was his; some of them attribute it to Demetrius Alexandrinus, an author of much later date than the former; and others believe it to have been written by Dionysius Halicarnasæus. Mr. Gibert proves, by a very judicious examination of the work itself, its style and principles, that it was not composed by Demetrius Phalereus.

ARTICLE II.

OF THE LATIN RHETORICIANS.

It was not without difficulty and opposition, that the Latin rhetoricians succeeded in establishing themselves at Rome. It is well known that this city, solely intent in the first ages upon establishing its power, and extending its conquests, did not apply itself at all to the study of the polite arts and sciences. Four or five hundred years elapsed, before they were in any esteem at Rome. Philosophy was absolutely unknown there, as well as all other eloquence but that which proceeds from nature and happiness of genius, without the aid of art or precepts.⁵ The Grecian philosophers and rhetoricians who went to Rome, carried thither with them that taste for the arts which they professed. We have seen that Paulus Æmilius,⁶ in the tour he made into Greece after having conquered Perseus the last king of Macedonia, demanded of the Athenians, that they would choose him an excellent philosopher to finish the education of his children. This custom had taken place for some time before at Rome;⁷ but was soon interrupted by an edict, passed in the consulship of Strabo and Messala, by which it was decreed, that all philosophers and rhetoricians should quit Rome; exercises in their way, unknown till then, giving offence to the state.⁸

Five or six years after this edict⁹ ambassadors arrived at Rome from Athens upon a particular affair. All the young Romans, who had any

taste for study, went to visit them, and were transported with admiration on hearing them discourse.¹⁰ Carneades especially, one of those ambassadors, in whose eloquence force united with grace and delicacy, acquired extraordinary reputation. The whole city rung with his praise. It was the universal talk, that a Greek of admirable talents had arrived; that his great knowledge made him more than man; and that his equally animated and delightful eloquence inspired such an ardour for study in youth, as induced them to renounce all other pleasures and avocations. The Romans saw with great satisfaction their children, passionately attached to these wonderful persons, addict themselves to the Greek erudition. Cato only, as soon as this love of learning began to gain ground in the city, was much concerned at it; apprehending, that the ambition and emulation of youth might be engrossed by it, and that in consequence they might prefer the glory of speaking, to that of acting, well. But when he saw that the discourses of these philosophers, translated into Latin by one of the senators, were in great vogue throughout the whole city, and were read with universal applause; he employed all his credit in the senate to terminate the affair which had brought the ambassadors to Rome, and to hasten their departure. "Let them return to their schools," said he, "and teach there as long as they please, the children of the Greeks; but let the Roman youth hear nothing within these walls except the laws and the magistrates, as they did before their arrival." As if the study of philosophy and eloquence was incompatible with obedience to the laws and magistrates.

The departure and absence of these philosophers did not extinguish the ardour for study, which their discourses had inspired.¹¹ The taste for eloquence became the universal passion of the Roman youth; and far from abating the desire of military glory, as Cato had apprehended, it only served to exalt its value and merit. We may judge of this from what history tells us of Scipio Africanus, who lived at that time. He was of so refined and delicate a taste in regard to polite learning, that, as well as Lælius, he was suspected of having some share in writing Terence's comedies, the most perfect work we have of the kind. He had always with him persons of the first rank in learning, as Panætius and Polybius, who accompanied him even in the field.¹² The latter

10 Plut. in Cat. Cens. p. 340.

5 Primò quidem Romani, qui nullum artis præceptum esse arbitrarentur, tantum, quantum ingenio et cogitatione poterant, consequerentur. *Cic. l. i. de Orat. n. 14.*

6 An. Rom. 563. Ant. J. C. 167.

7 An. Rom. 591. Ant. J. C. 161.

8 Sueton. de clar. rhet. c. 1.

9 An. Rom. 597. Ant. J. C. 155.

11 Auditibus oratoribus Græciæ, cognitisque eorum literis, adhibitisque doctoribus, incredibili quodam nostri hominis dicendi studio flagravérunt. *Lib. i. de Orat. n. 14.*

12 Scipio tam elegans liberalium studiorum omnique doctrinæ et auctor et admirator fuit, ut Polybium Panætiumque, præcellentes ingenio viros, domi militæque secum habuerit. *Vell. Patern. l. i. c. 13.*

informs us, that Scipio, while very young, and consequently even at the time we speak of, had a very strong inclination for the sciences, and that a number of learned men of every kind came daily from Greece to Rome. Now was Scipio the worse captain, for having been a man of letters?

From that time the study of eloquence, during almost fifty years, was so highly esteemed at Rome, that it was regarded as one of the most effectual methods for attaining the highest dignities in the commonwealth. But it was taught only by the Greek rhetoricians: whence all the exercises, by which the youth were formed, were made in a foreign language, and in the meantime that of the country, namely the Latin tongue, was almost universally neglected. Who does not perceive how much this custom, if I may venture to say so, was contrary to right reason and good sense? For after all, it was in Latin that these young persons were one day to plead at the bar, to harangue the people, and give their opinions in the senate: it was therefore in Latin they ought to have been taught to speak and compose. I do not say, that it was necessary to exclude compositions in Greek. As they could find no perfect models of eloquence but in the Greek orators, it was absolutely proper for them to study that language thoroughly, and to compose in Greek, in order to form themselves upon such excellent models. Cicero used this custom, even when more advanced in years, for which he gives this reason: "I did this," says he, "because the Greek language, supplying more ornaments, accustomed me to compose in the same manner in Latin. Besides studying under such great masters of eloquence, who were all Greeks, it would not have been in their power to have instructed and corrected my compositions, if I had not made them in Greek."¹ But he tells us, that he united them also with Latin exercises, though less frequently. I have said that Cicero was at that time somewhat advanced in life. For we shall soon see, that he composed his first studies only in Greek, the Latin rhetoricians not being yet established at Rome, or having but very lately begun to teach there. This it is time to explain, with which I shall introduce my account of the Latin rhetoricians, of whom I am to speak in this article.

L. PLOTIUS GALLUS.

Custom has a kind of despotic sway, and does not give place even to reason and experience without exceeding difficulty. Suetonius,² upon the authority of Cicero, in a letter which is lost,

informs us, that L. Plotius Gallus was the first who taught rhetoric at Rome in the Latin tongue.³ This he did with great success, and had a great concourse of hearers.

Cicero, at that time very young, studied rhetoric, but under Greek masters, who alone till then had taught it at Rome.⁴ He had acquired so great a reputation among his fellow-pupils, that out of particular distinction, and to do him honour, when they left the schools, they always placed him in the midst of them; and the fathers of those children, who every day heard them extol the pregnancy of his wit, and the maturity of his judgment, went expressly to the schools to be witnesses of them in person, not being able to believe all the great things related of him.

It was at this time Plotius opened a rhetoric-school at Rome.⁵ All the Roman youth, that had the least taste for eloquence, were passionately fond of hearing him. Cicero, then but fourteen years old, would gladly have followed that example, and improved from the lessons of this new master, whose reputation was very great throughout the whole city; and was sensibly concerned on being debarred that liberty. "I was prevented," says he, "by the authority and advice of the most learned persons, who were of opinion, that the exercises of rhetoric in the Greek tongue were better adapted to forming the minds of youth." It is not to be doubted, that Cicero means Crassus in this place:⁶ he explains himself more clearly in another, where he says, that while he was very young, he studied with his cousins, the sons of Aculeo, under masters chosen according to the taste and advice of Crassus.

The Latin rhetoricians were in great esteem at Rome, and their schools much frequented: but a terrible storm soon rose up against them.⁷ The censors, Domitius Ænobarbus and Licinius Crassus, passed an edict in regard to them, the tenor of which Suetonius has preserved.⁸ "We have been informed," say those censors, "that there are persons, who, under the name of Latin rhetoricians, set themselves up for teachers of a new art, and that youth assemble in their schools, where they pass whole days in idleness. Our ancestors have delivered down to us, what

3 An. Rom. 638. Ant. J. C. 94.

4 Plut. in Cic. p. 861.

5 Equidem memoria teneo, pueris nobis primum Latine docere coepisse Lucium Plotium quemdam: ad quem cum fieret concursus, quod studiosissimus quisque apud eum exerceretur, dolebam mihi idem non licere. Continuar autem doctissimorum hominum auctoritate, qui existimabant Græcis exercitationibus ali melius ingenia posse. Cic. apud Sueton. de clar. Rhet. c. ii.

6 Lib. ii. de Orat. n. 2.

7 An. Rom. 660. Ant. J. C. 92.

8 Sueton. de clar. rhet. c. i.

1 De clar. Orat. n. 319.

2 De clar. rhet. c. ii.

they desired their children should be taught, and to what schools they should go. These new establishments, so opposite to the customs and usages of our forefathers, are not pleasing to us, and appear contrary to discipline and good order. Wherefore we think it incumbent on us to notify this our opinion, as well to those who have opened such schools, as to such as frequent them, and to declare that such innovation is not agreeable to us."

The Crassus, of whom I have hitherto spoken, is one of the persons, whom Cicero introduces in his books *De Oratore*. That dialogue is supposed to have passed two years after the censorship of Crassus, An. Rom. 662. Ant. J. C. 90. He makes an apology in it for his edict against the Latin rhetoricians. "I silenced them," says he, "not to oppose, as some have reproached me, the progress of youth in eloquence, but on the contrary, to prevent their minds from being corrupted and stupified, and their contracting presumption and impudence. For indeed I observed, that among the Greek rhetoricians, how indifferent soever their merit, besides the exercise of speaking, in which their profession properly consists, there always was a fund of solid and estimable knowledge. But I did not conceive that our youth could acquire any thing under these new masters, unless it were boldness and confidence, always blamable, even when united with other good qualities. As this, therefore, was all they could learn of them, and their schools, to speak properly, were only schools of impudence, I thought it my duty, as censor, to put a stop to such abuses, and prevent their pernicious consequences."⁹

All I have hitherto said, proves how liable, in point of erudition and science, new methods and establishments are to obstacles and contradictions, even from persons of the greatest merit, and of the best intentions in other respects. But utility and truth at last prevail, and open themselves a way through all the difficulties that oppose them. When these storms and troubles are blown over; when prejudices, frequently blind and precipitate, have given place to serious and calm reflection; and things are examined with temper and in cool blood, we

are surprised that practices so useful in themselves should have been capable of meeting with such opposition. This is the fate, though of a different kind, the philosophy of Descartes experienced among us, which was at first attacked so warmly, and is now almost universally approved. The same happened at Rome in regard to the Latin rhetoricians. They perceived at length how consistent it was with right reason and good sense, to form and exercise youth for eloquence in the language they were always to speak; and after these first shocks, the schools of the Latin rhetoricians were established in tranquillity, and did not a little contribute to the amazing progress of the study of eloquence in the succeeding years.

The Greek rhetoricians, however, were not neglected, and had a great share in the improvement of which I have been speaking. It is surprising to consider the ardour and passion, with which the Roman youths, and even some of more advanced years went to hear these masters. Cicero had begun to appear at the bar in his twenty-sixth year.¹⁰ His pleadings for S. Roscius Amerinus acquired him an extraordinary reputation. Molo, the celebrated Greek rhetorician, came to Rome about this time as a deputy from the Rhodians. Cicero, highly capable as he already was, became his disciple, and thought himself happy and honoured in receiving lessons from him. After having pled two years, his health, or perhaps reasons of policy, having obliged him to suspend his application to business,¹¹ and to make a voyage into Greece and Asia, besides the several masters of eloquence whom he heard at Athens and elsewhere, he went expressly to Rhodes to put himself again under the discipline of Molo; in order that so excellent a master might take pains in reforming, and in a manner, in new-moulding his style: *Apollonio Moloni se Rhodius formandum ac velut recogendum dedit*.¹² Molo¹³ was an exceeding good pleader, and composed very finely: but his principal happiness lay in discerning and exploding the defects in the style of those, who applied themselves to him, and he had a wonderful happiness in correcting them, by the wise advice and solid in-

⁹ Etiam Latini, si diis placet, hoc biennio magistri dicendi extiterunt; quos ego censor edicto meo sustuleram: non quo (ut nescio quos dicere aiebant) acui ingenia adolescentium nollem; sed contra, ingenia obtundi nolui, corroborari impudentiam. Nam apud Græcos, cuius modo essent, videbam tamen esse, præter hanc exercitationem lingue, doctrinam aliquam et humanitatem dignam scientia. Hos verò novos magistros nihil intelligebam posse docere, nisi ut auderent: quod etiam cum bonis rebus conjunctum, per se ipsum est magnopere fugiendum. Hoc cum unum traderetur, et cum impudentia ludus esset, putavi esse censoria, ne longius id serperet, providere. *Lib. iii. de orat. n. 93, 94.*

¹⁰ De clar. orat. n. 312.

¹¹ Ibid. n. 315, 316.

¹² Quintili.

¹³ Quibus non contentus, Rhodum veni, meque ad eundem, quem Romæ audiveram, Molonem applicavi: cum actorem in veris causis, scriptoremque præstantem, tum in notandis animadvertendisque vitis, et instituendo docendoque prudentissimum. Is dedit operam (si modò id consequi potuit) ut nimis redundantes nos et superfluentes juvenili quadam dicendi impunitate et licentia, reprimeret, et quasi extra ripas diffuentes coerceret. Ita recepi me, biennio post, non modo exercitator, sed prope mutatus. Nam et contentio nimia vocis resederat, et quasi deferbuerat oratio. *Declar. orat. n. 316.*

structions he gave them. He endeavoured, for I dare not say he effected it (says Cicero) to correct and restrain a vicious redundancy in my style, which too licentiously overflowed its just bounds, and taught me not to abandon myself to the impetuosity of my years, and the fire of an imagination, that wanted maturity and experience. Cicero confesses, that from that time, a great alteration took place in his manner, as well in regard to the tone of his voice, which he exerted no longer with so much vehemence, as his style, which became more exact and correct. These young Romans must have had a very warm desire to improve themselves in eloquence; to take so much pains in going to hear the rhetoricians, and not to blush, though already in great reputation, to become their disciples again, and to confess their still having occasion for their aid. But, on the other side, the merit of such rhetoricians must have been very solid and well established, to have acquired so great a confidence in it, and to have supported the idea, which such persons as Cicero conceived of it.

Plotius, the first of the Latin rhetoricians, who gave occasion for what I have said hitherto, had without doubt colleagues and successors, who acquitted themselves of the same function with honour. Suetonius mentions several: but as they are little known, I proceed directly to Cicero, who indeed did not immediately teach eloquence as a master, but has left us excellent precepts upon it.

CICERO.

Cicero, by his treatises upon rhetoric, has justly merited the honour of being placed at the head of the Latin rhetoricians; as he has by his orations that of the first rank amongst the orators. His tracts upon rhetoric are: *Three books de Oratore*; one book entitled, simply, *the Orator*; *A dialogue, entitled Brutus upon the Illustrious Orators*; two books upon *Invention*; the *Partes Oratoria*, *the complete Orator*, and the *Topics*. In this enumeration of Cicero's works upon eloquence, I do not follow the order of time in which they were composed.

I. The three first are absolute masterpieces, in which what was called the *Roman urbanity*, *Urbanitas Romana*, prevails in a supreme degree, which answers to the Atticism of the Greeks, that is to say, whatever was finest, most delicate, most animated, and in a word, most consummate as to thought, expression, and genius. The three books of *the Orator* are, properly speaking, Cicero's rhetoric: not a dry rhetoric, stuck with precepts, and destitute of grace and beauty, but one that, with the solidity of principles and reflections, unites all the art, delicacy, and ornament, of which a subject of

that nature is susceptible. He composed this work at the request of his brother Q. Cicero, who desired to have something more perfect of his than the books upon invention, which were the first-fruits of his youth, and by no means worthy the reputation he afterwards attained.¹ To avoid the air and dryness of the schools, he treats this subject in dialogues, wherein he introduces as speakers the greatest and most famous persons Rome had for wit, erudition, and eloquence. The time wherein these dialogues are supposed to be held, is the 662d year from the foundation of Rome, and ninety years before Jesus Christ, in the consulship of L. Marcus Philippus, and Sextus Julius Caesar.

This manner of writing, I mean dialogue, is extremely difficult: because, without mentioning the variety of characters, which must everywhere be equally sustained without the least deviation from them, two things that seem almost incompatible must unite in them, the simple and natural air of familiar discourse, with the elegant style of the conversation of persons of wit. Plato, of all the ancient authors, is generally conceived to have succeeded best in dialogue. But we may indisputably give Cicero an equal rank with him, to say no more, especially in the treatises of which we now speak. I do not know whether my esteem and love for an orator, with whom I might say I have been brought up from my earliest infancy, prejudice and blind me in his favour; but, in my sense, there is in these conversations a taste, a salt, a spirit, a grace, a native elegance, that can never be sufficiently admired.

The third of the books I speak of treats, among other subjects, of the choice and order of words, a dry and disagreeable topic in itself, but of great use to the Roman eloquence, and which more than any thing shows the profound genius and extent of mind of this orator. When he came first to the bar, he found the Roman eloquence absolutely destitute of an advantage, which infinitely exalted that of the Greeks, to which he had devoted his whole application, and of which he knew all the beauties, as well as if it had been his native tongue, so familiar had he made it to him by close and profound study. This advantage was the sound, number, cadence, and harmony, of which the Greek is more susceptible than any other language, and which give it an incontestable superiority in this view to them all. Cicero, who was extremely zealous for the honour of his country, undertook to impart to it this advantage, of

¹ Vis enim, quoniam quaedam pueris aut adolecentulis nobis ex commentariolis nostris inchoata atque rudia ex-ciderunt, vix hac ætate digna et hoc usu—aliquid illudem de rebus politius à nobis perfectiusque proferri De orat. l. i. n. 5.

which till then the Greeks had been in sole possession. He perceived that words like soft wax, have a flexibility wonderfully capable of receiving every kind of form, and of being adapted to whatever manner we please.² The proof of which is, that for all the different species of verse, which are very numerous; for all the diversity of styles, the simple, the florid, and the sublime; for all the effects which speech is capable of producing, to please, to convince, to move; words of a different nature are not employed; but taken from one common heap, to use the expression, and alike disposed for every use, they lend themselves at the poet's and orator's discretion, to be applied in whatever manner they think fit. Cicero, well convinced of this principle, of which the reading and study of the Greek authors had given him a sensible proof, or rather which he had extracted from nature itself, undertook to add this charm to the Latin language, of which, before his time, it was entirely destitute. This he effected with such success and promptitude, that in a few years it assumed a quite new form, and, what has no parallel, attained almost instantly a supreme perfection in this way. For every body knows, that generally the progress of arts and sciences is slow, and that they do not attain their final maturity but by degrees. This was not the case in the matter of which we are speaking, namely, the number and harmony of speech. Cicero seized almost immediately the fine and the perfect, and introduced into his language, by the happy arrangement of his words, a sweetness, grace, and majesty, which almost equalled the Greek; and with which the ear, of all who have the least sensibility for sound and harmony, is still agreeably soothed. It is not surprising, therefore, that this great orator, to secure to his language the advantage he had acquired it, and to perpetuate the use and possession of it, should think it incumbent on him to treat this subject in all its extent. Accordingly he enters upon it with a vast enumeration of things, which cannot afford us any pleasure now, to whom this is a foreign language, but which was extremely useful and

important at the time he wrote it; and it is easy to perceive, that he has treated it with particular attention, and has employed the whole extent of his learning and capacity, to display it in all its light. Accordingly, Quintilian observes, that of all his works of rhetoric, this piece is the most elaborate.³

The same service has been done the French language; and, if I mistake not, Balzac was the first who discerned himself, and made others discern, how susceptible it is of the graces of number, harmony, and cadence. Since his time, this part of composition has been very much improved: Mr. Flechier particularly, and all our good writers, leave us nothing to desire in this point. It is highly important to make youth attentive to it, and to accustom their ears to a lively and instantaneous discernment of what is sweet and agreeable, or harsh and dissonant in the disposition of words. The treatise lately published by the Abbé Olivet, upon the prosody of the French tongue, may be of great use to this purpose.

I have already said, that the three books *de Oratore* may be considered as the rhetoric of Cicero. And indeed he has included in it almost all the precepts of that art, not in the common didactic order of the schools, but in a more free manner, and one that seems less studied; to which he has annexed reflections that infinitely exalt their value, and show their just use.

II. The book entitled *the Orator*, does not give place to the former either in beauty or solidity. Cicero states in it the idea of a perfect orator, not of one that ever was, but of such a one as may be. He sets a particular value upon this work, and seems to think of it with great satisfaction and complacency; and does not hesitate to own, that he employed the whole extent of his wit, and all the force of his judgment in composing it; which is saying a great deal. He explains himself to this effect in writing to a friend, who had highly approved of the work, and consents that whatever judgment the public formed of it, whether good or bad, shall determine the author's reputation.⁴ He adds, (which I mention for the sake of our youth) that he should be glad if young Lepta, who was his friend's son, begins so early to read

² Nihil est tam tenerum, neque tam flexibile, neque quod tam facile sequatur quocumque ducas, quam oratio. Ex hac versus, ex eadem disparet numeri conficiuntur: ex hac etiam soluta variis modis multorumque generum oratio. Non enim sunt alia sermonis, alia contentionis verba: neque ex alio genere ad usum quotidianum, alio ad scenam pompamque sumuntur: sed ea nos cum jacentia sustulimus è medio, sicut mollissimam ceram ad nostrum arbitrium formamus et fingimus. Itaque tum graves sumus, tum subtiles, tum medium quiddam tenemus: sic institutam nostram sententiam sequitur orationis genus, idque ad omnem rationem, et aurium voluptatem, et animorum motum mutatur et flectitur. *De orat.* l. iii. n. 176, 177.

³ Cui (M. Tullio) nescio an ulla pars hujus operis sit magis elaborata. *Lib.* ix. c. 4.

⁴ Oratorem meum tantopere à te probari vehementer gaudeo. Mihi quidem super suadeo, me, quicquid habuerim judicii, in illum librum contulisse. Qui si est talis, qualem tibi videri scribis; ego quoque aliquid sum. Sin aliter, non recuso quin, quantum de illo libro, tantundem de judici mei fama detrahatur. Leptam nostrum cupio delectari jam talibus scriptis. Etsi abest maturitas ætatis, jam tamen personare aures ejus hujusmodi vocibus non est inutile. *Epist.* xix. l. 6. *ad Famil.*

works of that kind with some pleasure: because though his years did not admit his making all the improvement they were capable of affording, it was of some consequence to him to be early affected with lessons of that sort.

III. The *Brutus* of Cicero is a dialogue concerning the most famous Greek and Roman orators, who had appeared to his time: for he mentions none who were then alive, except Cæsar and Marcellus. This work was composed some time before the former, and perhaps in the same year. In the long enumeration contained in this book, wherein Cicero particularly remarks upon the style of a great number of orators, there is an admirable variety of portraits and characters, which all relate to the same subject, without however resembling each other in the least. He intersperses reflections, and a kind of digression, from time to time, which add to the value of the piece, and may be of great use in forming the orator.

IV. His treatise upon the most perfect kind of *Orator*, is very short. Cicero maintains in it, that the Attic style is by far the most perfect, but that it includes the three different kinds of eloquence, and that the orator makes use of them as his subject requires. To convince those of this who are of a different opinion, he translated the celebrated orations of Æschines against Demosthenes, and of Demosthenes against Æschines. The work we now speak of was only a kind of preface to that translation, of which we cannot sufficiently regret the loss.

V. The *Topics* of Cicero contain the method of finding arguments by the means of certain terms, which characterize them, and are called *Times*, *Locus*, *common places of Rhetoric*, or of *Logic*. We are indebted for the invention or perfection of this art to Aristotle. Cicero composed this treatise at the request of Trebatius the lawyer, one of his friends, to explain that written by the philosopher upon this subject. There is one thing remarkable in this work, which shows the genius, memory, and facility of Cicero in composing; namely, his not having that philosopher's book, when he undertook to explain him. He was upon a voyage and at sea, as he tells us himself in this book.¹ He recalled to his remembrance Aristotle's work, explained it, and sent what he had done to his friend. He must have known it perfectly well, and have had it very strongly in his mind, to have worked upon it only from his memory.

VI. The *Partes Oratoria* are a very good rhetoric, disposed in divisions and subdivisions of subjects (whence it takes its title.) Its style is very simple, but clear, succinct, and elegant, and well adapted to the capacity of beginners;

so that, with the addition of examples, it might be used with success, though Cicero did not think proper to annex any to it.

VII. The Books of Rhetoric, or *De Inventionis Oratoria*, are certainly Cicero's. Only the two first remain: the two others are lost.² I have already observed, that he composed them during his youth, and that he afterwards thought them unworthy his reputation.

The Rhetoric inscribed to Herennius.

It is not easy to know who was the author of the four books of rhetoric inscribed to *Herennius*, which we find in the front of Cicero's works. In the common editions the title says it was not known; but some of the learned ascribe them to Cornificius. It is a rhetoric in form, of which the style, though simple and familiar, is pure and Ciceronian; which has given some people reason to believe it a work of Cicero's: but this opinion admits of great difficulties.

SENECA THE RHETORICIAN.

Seneca, of whom we speak in this place, was born at Corduba in Spain, about the 700th year of the city of Rome, fifty-three years before Jesus Christ. His surname was *Marcus*. He came to settle at Rome in the reign of Augustus, whither he brought with him his wife *Helvia*, and three sons. The first called *Mela*, was the father of the poet Lucan; the philosopher's name was *Lucius*; and the third son's *Novatus*: but this last being adopted into another family, he took the name of his father by adoption *Junius Gallio*. Mention is made of him in the *Acts of the Apostles*.³

Seneca, the father, collected from more than an hundred authors, as well Greeks as Romans, whatever was most remarkable, that they had either said or thought upon the different subjects they had treated in emulation of each other, by way of exercising their eloquence according to the custom of these times. Of the ten books of *Controversies* or *Disputations*, contained in this collection, scarce five remain, and these very defective. To the books of controversies, one of deliberations is prefixed, though it is known, that Seneca did not publish it till after the former.

These works of Seneca's give Mr. Gibert occasion to explain with great order and evidence the esteem and use in which declaiming was held of old. I shall insert in this place that little tract almost entirely; which will be of great service for the understanding of what will be said in the sequel, upon the manner in

¹ Topic, n. 5.

² De orat. l. i. n. 5.

³ Acts xviii. 12.

which the rhetoricians formed young persons for eloquence.

Declamation is a word which occurs in *Horace*,⁴ and still more in *Juvenal*:⁵ though it was not known at Rome before Cicero and Calvus.⁶ The compositions so called, by which eloquence was exercised, and of which the subjects, true or feigned, were sometimes in the deliberative, sometimes in the judiciary, and seldom in the demonstrative kind. The discourses made upon these subjects were an image of what passed in the public councils and at the bar. Declaiming was the method taken by Cicero while young to become an orator, which at that time he practised in Greek.⁷ He continued to use it, when more advanced in years, but in Latin. He exercised himself in the same manner, even when the troubles of the state had obliged him to abandon the bar.⁸ At that time he repeated to Cassius and Dolabella, or others, the harangues of this kind, which he had composed by way only of exercise. This was the common method of all who aspired at eloquence, or were willing to acquire perfection in it; that is to say, the principal persons of the state. They applied themselves to it under the direction of Cicero, and improved themselves by his advice. "Hirtius and Dolabella," says Cicero, "come often to declaim at my house, and I as often go to sup with them."⁹ They came to him either to repeat or correct their discourses; after which he went home with them to supper, their tables being better than his own. Pompey the Great applied himself also very closely to declamation a little before the civil wars, to enable himself to answer Curio, who had sold his talent to Cæsar's interests, and gave the opposite party great disquiet.¹⁰ Mark Antony did the same to reply to Cicero; and Octavius, even at the siege of Modena, did not omit this exercise. We must remember, that at Rome, whether in the senate or before the people, eloquence generally determined the most important affairs, and thereby became absolutely necessary to those who aspired at being powerful in them. I omit Cicero's son

Marcus, who exercised himself also both in Greek and Latin, but not with the same success.¹¹ Demetrius Phalereus is said to have been the inventor of declamation: and Plotius Gallus, of whom we have spoken above, was the first who introduced the use of it into the Latin tongue.

It was, according to this idea of declamation, that all the lovers of eloquence, whether Greeks or Romans, assembled in the houses of persons eminent in the same way; such for instance as Seneca, where they pronounced discourses upon subjects before agreed upon. Our author had the greatest memory conceivable.¹² He cites several examples of a like nature. Cyneas, Pyrrhus's ambassador, having had audience of the senate upon his arrival, the next day saluted all the senators, and people who had been present at it in great numbers by their names. A certain person having heard a poem repeated, to surprise the author of it, pretended it was his work, and to prove it, repeated the whole without hesitating, which the author could not do himself. Hortensius, in consequence of a challenge, stayed a whole day at a sale of goods by auction, and at night repeated, in the order they were sold, without the least mistake, the names of the several moveables, and of the persons that bought them. Seneca's memory was scarce less admirable. He says, that in his youth he repeated two thousand words after having only heard them once over; and that too in the same order they had been spoken. By this wonderful talent, whatever was most curious in all the declamations he had ever heard, was so strongly impressed upon his mind, that long after, in a very advanced age, he was capable of recalling it to his remembrance, though consisting of so many detached passages, and of reducing these to writing for the use of his sons, and posterity.

I shall have occasion, before I conclude this article, to explain in what manner declamation conduced to occasion the decay and corruption of the taste for true eloquence.

Dialogue Upon the Orators, or Upon the Causes of the Corruption of Eloquence.

The author of this work is unknown. Some ascribe it to Tacitus, others to Quintillian, but without much foundation. What we may be assured of is, that it is a proof of his wit and capacity whoever he was, and deserves a place among the best works after the Augustan age, from the purity and beauty of which it must however be allowed to be very remote. There are very fine passages in it. What he says by

4 Trojani belli scriptorem——

Dum tu declamas Romæ, Præneste relegi.

Hor. Ep. i. lib. 2.

5 Ut pueris placeas, et declamatio fias.

Juven. Sat. x.

6 Apud nullum auctorem antiquum, ante ipsum Cicero- nem et Calvum, inveniri potest. Senec. Controv. l. i.

7 Cicero ad Præturam usque græcè declamavit, Latinè verò senior quoque. Sueton. de clar. Rhet.

8 Cic. l. vii. Epist. 33, ad Famil. Id de clar. Orat. n. 310.

9 Hirtium ego et Dolabellam dicendi discipulos habeo, cenandi magistros. Puto enim te audisse——illos apud me declamitare, me apud illos comitare. Epist. xvi. l. 9.

10 Suet. de clar. Rhet.

11 Epist. xxi. l. 16, ad Famil.

12 Senec. in Præf. Controv.

way of panegyric upon the profession of pleaders, seems to me of this kind. It is proper to remind the reader, that it is a heathen who speaks.

"The pleasure which arises from eloquence," says he, "is not rapid and momentary; but the growth of every day, and almost every hour. And indeed, what can be more grateful to an ingenuous mind, that has a taste for exalted satisfaction, than to see his house continually thronged by crowds of the most considerable persons in a city?—to be conscious that it is not to his riches, office, or authority, but to his person that they come to pay this honour? The greatest wealth, the most splendid dignities, have they any thing so delightful and affecting, as the voluntary homage, which persons, equally to be respected for their birth and age, come to render to the merit and knowledge of an advocate, though often young, and sometimes destitute of the goods of fortune, in imploring the aid of his eloquence either for themselves or their friends, and confessing, in the midst of the affluence with which they are surrounded, that they are still in want of what is most valuable and excellent? What shall I say of the officious zeal of the citizens to attend him whenever he goes abroad, or returns to his house?—of the numerous audiences in which all eyes are fixed on him alone, whilst a profound silence reigns universally, with no other interruption but starts of admiration and applause?—in fine, of that absolute power which he has over men's minds, by inspiring them with such sentiments as he pleases? Nothing is more glorious and exalted than what I have now said. But there is still another pleasure more intense and affecting, known only to the orator himself. If he pronounces a discourse, that he has had time to study and polish at leisure, his joy as well as diction has something more solid, and more assured in it. If he has only some few moments' reflection allowed him to prepare himself for his cause, the very anxiety he feels upon that account, makes the success more grateful to him, and exalts the pleasure it gives him. But what still soothes him more agreeably, is the success of an unpremeditated discourse, ventured extemporaneously. For the productions of the mind are like those of the earth. The fruits, which cost no trouble, and grow spontaneously, are more grateful than those we are obliged to purchase with abundance of pains and cultivation."¹

1 Ad voluptatem oratoris eloquentiæ transeo, cuius jucunditas non uno aliove momento, sed omnibus prope diebus, et prope omnibus horis contingit. Quid enim dulcius libero et ingenio animo, et ad voluptates honestas nato, quam videre plenam semper et frequentem domum concursu splendidissimorum hominum? Idque scire non pecunie, non orbitati, neque officii alieujus administrationi, sed sibi ipsi dari! Illos quinimo orbes, et locupletes, et potentes, venire plerumque ad juvenem et pauperem,

We cannot, in my opinion, deny that there are in this description a great many ingenious and solid thoughts, strong and emphatical expressions, and lively and eloquent turns. Perhaps there is too much wit and shining conceits in it: but that was the fault of the age.

I shall add here another very fine passage from the same author, in which he ascribes the principal causes of the corruption of eloquence to the bad education of children.

"Who does not know, that what has occasioned eloquence and the other arts to degenerate from their ancient perfection, is not the want of genius, but the indolence into which youth are fallen, the negligence of parents in the education of their children, the ignorance of the masters employed to instruct them, in fine, the oblivion and contempt of the taste of the ancients. These evils, which had their rise at Rome, have dispersed themselves from the city into the country of Italy, and infected all the provinces. Of old, in every house, it was the custom for a child born of an ingenuous mother, not to be sent to the cottage of a nurse bought among slaves, but to be nurtured and educated in the bosom of her who bore him, whose merit and praise it was to take care of her house and children. Some female relation in years, and of known virtue and probity, was chosen to have the care of all the children of the family, in whose presence nothing contrary to decency and good manners was suffered to be spoken or done with impunity. She found the means to unite not only their studies and application, but even their play and recreations, with a certain air of modesty and reserve, that tempered their ardour and vivacity. It is thus we find that Cornelia the mother of the Gracchi, Aurelia of Caesar, and Attia of Augustus, governed their children, and made them capable of appearing in the world with splendour. The view of this strict and manly

ut aut sua, aut amicorum discrimina commendent. Ulla, ne tanta ingentium opum ac magnæ potentiæ voluptas, quam spectare homines veteres, et senes, et totius urbis gratia subnixos, in summa rerum omnium abundantia contentes, id quod optimum sit se non habere? Jam vero qui rogatorum comitatus et egressus! que in publicis species! que in judiciis veneratio! quod gaudium consurgendi assistendique inter tacentes, in unum conversos! coire populum, et circumfundi coram, et accipere affectum quemcumque orator induerit. Vulgata dicentium gaudia, et imperitorum quoque oculis exposita perenseo. Illa secretiora, et tantum ipsis orantibus nota, majora sunt. Sive accuratam meditatumque affert orationem est quoddam, sicut ipsius dictionis, ita gaudii pondus et constantia. Sive novam et recentem curam non sine aliqua trepidatione animi attulerit, ipsa sollicitudo commendat eventum, et lenocinatur voluptati. Sed extemporalis audacia, atque ipsius temeritatis vel præcipua jucunditas est. Nam ingenio quoque, sicut in agro, quamquam alia diu secanitur atque elaborantur, gratiora tamen quæ sua sponte nascuntur. Cap. 6.

education was to prepare the minds of children, by preserving them in all their natural purity and integrity, and preventing their being infected with any bad principle, to embrace the study of arts and science with ardour; and whether they chose the profession of arms, or applied themselves to the laws or eloquence, that they might addict themselves solely to their profession, and the attainment of a perfection in that alone.² But in these days, no sooner is a child born, but he is given to some Greek slave, with a servant or two more to attend her, of the meanest and most useless sort in the family. At this tender age, susceptible of all impressions, he hears nothing but the frivolous, and often loose and abandoned stories of the lowest domestics. None of them have the least regard for what they say or do before their young master. And indeed, what attention of that kind can be expected from them, while the parents themselves accustom their children not to modesty and good manners, but to every kind of freedom and licentiousness: whence ensues by degrees an air of declared impudence, void of regard either for themselves or others. There are, besides this, certain vices peculiar to this city, which seem almost to have been conceived with them in their mothers' womb: such are the taste for theatrical shows, gladiators, and chariot-races. Are not these almost the only subjects of conversation among young people, and indeed all companies? Is it probable, that a mind intent upon, and in a manner besieged by these trifling amusements, should be very capable of applying to serious studies?"³

² Quis ignorat et eloquentiam et ceteras artes deservisse ab ista vetere gloria, non inopia hominum, sed desidia juventutis, et negligentia parentum, et incipientia precipitum, et oblivione moris antiqui? quæ mala primum in urbe nata, mox per Italiam fusa, jam in provinciis manant—

Jam primum suus cuique filius, ex casta parente natus, non in cella emptæ nutricis, sed gremio at sinu matris educabatur; cuius præcipua laus erat, tueri domum, et inservire liberis. Eligebatur autem aliqua major natu propinqua, cuius probatis spectatque moribus omnis cujuspiam familie suboles committeretur: coram qua neque dicere fas erat quod turpe dictu, neque facere quod inhonestum factu videretur. Ac non studia modo curasque, sed remissiones etiam lususque puerorum, sanctitate quadam ac verecundia temperabat. Sic Corneliam Gracchorum, si Aureliam Cæsaris, sic Attiam Augusti matrem præfuisse educationibus, ac produxisse principes, liberos accepimus. Quæ disciplina ac severitas eod pertinebat, ut sincera et integra et nullis pravitatibus decorta uniuscujusque natura, toto statim pectore arripere artes honestas: et, sive ad rem militarem, sive ad juris scientiam, sive ad eloquentiæ studium inclinasset, id solum ageret, id universum hauriret. *Cap. 28.*

³ At nunc natus infans delegatur Græculæ alicui ancillæ, cui adjungitur unus aut alter ex omnibus servis plerumque villisimus, nec cuiquam serio ministerio accommodatus. Horum fabulis et erroribus teneri statim et rudæ animi imbuuntur. Nec quicquam in tota domo

These two passages suffice to give the reader some idea of this work, and to make him regret that it is not come down entire to us.

This dialogue may be divided into three parts. The first introduces an advocate and a poet contending upon the pre-eminence of their respective arts, and enlarging in praise of them, the one of eloquence, and the other of poetry. The second part is a speech of the same advocate, whom the author calls Aper, in favour of the orators of his times against the ancients. He lived in the reign of Vespasian, and was at the head of the bar. The third part of the work is an inquiry into the causes of the fall or corruption of eloquence. The speakers are Messala, Secundus, Maternus, and Aper. All that Secundus, and part of what Maternus, said, is lost, which makes a great chasm in the work, without mentioning several other defective passages.

QUINTILIAN: (*Marcus Fabius Quintilianus.*)

I shall reduce what I have to say upon Quintilian to three heads: First, I shall relate what is known of his history: Secondly, I shall speak of his work, and give the plan of it: And lastly, I shall explain the method of instructing youth and teaching rhetoric, as practised in his time.

I. *What is known of Quintilian's History.*

It appears that Quintilian was born in the second year of the emperor Claudius, which is the forty-second of Jesus Christ. This is according to Mr. Dodwell's conjecture, who is my guide in chronology as to what relates to the birth, life, and employments of our rhetorician, and whose Annals upon Quintilian are arranged in a very clear and probable order.

The place of his birth is disputed. Many say that he was a native of Calagurris, a city of Spain, upon the Heber, now called *Calahorra*. Others believe, with sufficient foundation, that he was born at Rome. It is not certainly known whether he was the son or grandson of the orator Fabius, mentioned by Seneca the father, and placed by him in the number of those orators, whose reputation dies with them.⁴

pensata habet quid coram infante domino aut dicat, aut faciat: quando etiam ipsi parentes nec probitati neque modestiæ parvulos assuefaciunt, sed lascivias et libertati: per quæ paulatim impudentia irripit, et sui alienique contemptus. Jam vero propria et peculiararia hujus urbis vitia pene in utero matris concipi mihi videntur, histrionalis favor, et gladiatorum equorumque studia. Quibus occupatus et obsessus animus quantum loci bonis artibus relinquit? quotumquemque Inveneriis qui domi quidquam aliud loquatur? quos alios adolescentulorum sermones excipimus, si quando auditoria intravimus? *Cap. 28.*

⁴ Senec. *Controv. l. v. in præf.*

Quintilian without doubt frequented the schools of the rhetoricians at Rome, in which youth were taught eloquence. He used another more effectual method for the attainment of it, which was to make himself the disciple of the orators of the greatest reputation. Domitius Afer held at that time the first rank among them. Quintilian did not content himself with hearing him plead at the bar; he often visited him; and that venerable old man, though the admiration of the age in which he lived, did not disdain to converse with a youth, in whom he observed great and very promising talents. This important service, those who are grown old with glory in this illustrious profession, have in their power to render their juniors, especially when they have quitted the bar for the sake of retirement. Their houses may then become a kind of public school for the youth, who aspire at excelling in eloquence, and who may address themselves to them, to be informed by what means they may succeed.¹ Quintilian knew how to improve Afer's goodwill to his own advantage; and it appears, by the questions he proposed to him, that he had in view the forming of his taste and judgment by these conversations. He asked him one day which of the poets he thought came nearest Homer.² "Virgil," says Afer, "is the second, but much nearer the first than the third."³ He had the grief to see this great man, who had so long done honour to the bar, survive his own reputation, from not having known how to apply the wise advice of Horace,⁴ and from having chose rather to sink under the weight of his function than retire, as he is reproached; *malle eum deficere, quam desinere*. Domitius Afer died the 59th year of the Christian era, the same year in which Juvenal was born.

Two years after, Nero sent Galba governor into Hispania Tarraconensis, Ant. J. C. 61. It is believed that Quintilian followed him thither, and that after having taught rhetoric, and exercised the profession of an advocate during upwards of seven years, he returned to Rome with him.

It was about the end of this year that Galba was declared emperor, and Quintilian opened a school of rhetoric at Rome, Ant. J. C. 68. He was the first who taught it there by public authority, and with a salary from the state; for which he was indebted to Vespasian. For, according to Suetonius,⁵ that prince was the first that assigned the rhetoricians, both Greeks and Romans, pensions out of the public treasury; to the amount of twelve thousand five hundred livres.⁶ Before this establishment there were masters who taught it without being authorized by the public. Besides the pensions received by these rhetoricians from the state, the fathers⁷ paid a sum for the instruction of their children, which Juvenal thought very small in comparison with those they expended on trivial occasions. For, according to him, nothing cost a father less than his son, though he regretted every thing expended on his education: *Res nulla minoris Constat patri quam filius*. This sum amounted to two hundred and fifty livres: *Duo sestertia*. Quintilian was public professor of rhetoric twenty years with universal applause. He exercised at the same time, and with the same success, the function of an advocate, and acquired also great reputation at the bar. When the different parts of a cause were distributed to different pleaders, as was the custom of old, he was generally chosen to state or open the matter of it, which requires great method and perspicuity.⁸ He excelled also in the art of moving the passions; and he confesses⁹ with that modest freedom natural to him, that he was often seen in pleading, not only to shed tears, but to change countenance, turn pale, and express all the signs of the most lively and sincere affliction.¹⁰ He does not deny but it was to this talent that he owed his reputation at the bar. And indeed it is chiefly by this character, that an orator distinguishes himself, and conciliates all the suffrages in his favour. We shall soon see how well qualified he was to instruct youth, and in what manner he acquired the love and esteem of every body on that account. Among the many illustrious disciples that frequented his school, Pliny the younger did him most honour, by the beauty of his genius, the elegance and

1 Frequentabunt ejus domum optimi juvenes more veterum, et veram dicendi viam velut ex oraculo petent. Hos ille formabit, quasi eloquentie parens. *Quintil.* l. xii. c. 11.

2 *Quintil.* l. xii. c. 11.

3 Uta verbis istis domus ex Afro Domitio juvenis accipit: qui mihi interroganti, quem Homero credere maximè accedere; Secundus, inquit, est Virgilius, propter tamen primo quam tertio. *Quintil.* l. x. c. 1.

4 Solve senescentem mature sanus equum, ne Peccet ad extremum ridendus, et illa ducat.

Hor. Ep. l. l. i.

Prudent dismiss the courser from the race,
Lest age and broken wind his youth disgrace

5 Primus è fisco Latinis Græcisque rhetoribus annua centena constituit. *Sueton. in Vesp. c. xviii.*

6 About £200 sterling.

7 Hos inter sumptus sestertia Quintilianus

Ut multum duo sufficient. *Res nulla minoris*

Constat patri quam filius.

Juv. Sat. vii. l. 3

8 *Quintil.* l. iv. c. ii.

9 *Id. l. vi. c. 2.*

10 Hæc dissimulanda mihi non fuerunt, quibus ipse, quantuscumque sum aut fui, (nam pervenisse me ad ali-quod nomen ingenii credo) frequenter motus sum, ut me non lacrymæ solum deprehenderint, sed pallor, et verè similis dolor. *Quintil.*

solidity of his style, the admirable sweetness of his disposition, his liberality to men of learning, and his peculiar warmth of gratitude for his master, of which he afterwards gave him a most illustrious proof.

After having devoted twenty years entirely to the instruction of youth in the school, and the defence of clients at the bar, he obtained the emperor Domitian's permission to quit both these equally useful and laborious employments. Instructed by the sad example of his master Domitius Afer,¹¹ he believed it proper to think of a retreat, before it became absolutely necessary, and that he could not put a more graceful period to his labours, than by renouncing them at a time, when he should be regretted: *Honestissimum finem putabamus, desinere dum desideraremur*; whereas Domitius chose rather to sink under the weight of his profession, than to lay it down. It was upon this occasion that he gives wise advice to his brethren the pleaders. "The orator," says he, "would he take my opinion, would sound a retreat, before he fell into the snares of age, and gain the port, whilst his vessel was sound and in good condition."¹² Quintilian, however, at that time was only forty-six or forty-seven years old, a florid and robust time of life. Perhaps his long application had begun to impair his health. However that may be, his was not a leisure of indolence and sloth, but of activity and ardour, so that he became in some measure still more useful to the public than he had ever been by all his past labours. For indeed the latter were confined within the narrow bounds of a certain number of persons and years; whereas the works, which were the fruit of his retirement, have instructed all ages: and we may say, that Quintilian's school has continued the school of mankind from his death, and still continues to resound with the admirable precepts he has left us upon eloquence.

He began by composing a treatise *Upon the Causes of the Corruption of Eloquence*, the loss of which can never be sufficiently regretted, Ant. J. C. 89. It undoubtedly is not the piece still extant under the title of *A Dialogue upon the Orators*. At the time when he began this work, he lost the youngest of his two sons only five years of age: and some months after, a sudden death deprived him of his wife, who was only nineteen years old, and even somewhat less.¹³

Some time after, at the solicitation of his friends, he began his great work, the *Institutiones Oratoria*, consisting of twelve books, Ant. J. C.

90: of which I shall give an account in the sequel.

He had finished the three first books of it, when the emperor Domitian committed the two young princes, his great nephews, whom he designed for his successors, to his care, Ant. J. C. 91.¹⁴ They were the grandsons of his sister Domitilla, whose daughter, named also Domitilla, had married Flavius Clemens, the emperor's cousin-german, by whom she had these two princes. This was a new motive to him for redoubling his application to complete his work. His own words deserve repeating, the passage being remarkable. "Hitherto," says he, addressing himself to Victorinus, to whom he dedicates this piece, "I wrote only for you and myself; and, confining those instructions to our own houses, when the public did not think fit to approve them, I thought myself too happy that they might be useful to your son and mine; but since the emperor has vouchsafed to charge me with the education of his nephews, should I esteem as I ought the approbation of a god, and know the value of the honour he has conferred upon me, if I did not measure the greatness of my undertaking by that idea. And, indeed, in whatever manner I consider it, whether in regard to manners or to knowledge and art, what ought I not to do, to deserve the esteem of so sacred a censor; a prince, in whose person supreme eloquence is united with supreme power? If then we are not surprised to see the most excellent poets, not only invoke the muses at the beginning of their works, but again implore their assistance, whenever in the course of it some new important object arises to be treated; with how much greater reason ought I to be pardoned, if what I did not at first I now do, and call all the gods to my aid, particularly him, under whose auspices I henceforth write, and who, more than all the rest, presides over study and science? May he then be propitious to me; and, proportioning his graces to the high idea he hath given of me, in a choice so glorious and so difficult to sustain, may he inspire my mind with the force and elevation it wants, and render me such as he hath believed me!"¹⁵

¹⁴ Quintil. in Proem. l. iv. Sueton. in Domit. c. 15.

¹⁵ Adhuc velut studia inter nos conferebamus; et, si parum nostra institutio probaretur à ceteris, contenti fore domestico usu videbamur, ut tui meique filii disciplinam formare, satis putaremus. Cum verò mihi Domitianus Augustus sororis suæ nepotum delegaverit curam, non satis honorem judiciorum cælestium intelligam, nisi ex hoc quoque oneri, magnitudinem metiar. Quis enim mihi aut mores excolendi sit modus, ut eos non immeritò probaverint sanctissimus Censor? aut studia, ne fefellisse in his videar Principem, ut in omnibus, ita in eloquentia quoque eminentissimum? Quod si nemo miratur Poetas maximos sæpe fecisse, ut non solum initia operum suorum

¹¹ Quint. l. xii. c. 11.

¹² Antequam in has artatis veniat insidias, receptul canet, et in portum integra navo perveniet. Quint. l. xii. c. 11.

¹³ Quintil. in Proem. l. vi.

It must be confessed, that there is in this compliment abundance of wit, loftiness, and grandeur, especially in the thought with which it concludes: "And render me such as he hath believed me." But is it possible to carry flattery and implety to a greater height, than to treat a prince as a god, who was a monster of vice and cruelty? Nor am I even sure whether the last thought be so just as it is shining: "And render me such as he hath believed me." He was not such then in reality: and how came this pretended god to believe he was? Again, if instead of extolling the regularity and purity of his manners, he had contented himself with enlarging upon his eloquence and the other talents of the mind upon which he valued himself, the flattery had been less odious. He praises him in another place¹ in the same manner, where he prefers him above all other poets; at which time it is very likely, that the consular ornaments were conferred upon Quintilian.

The care of the young princes' education with which Quintilian was charged, did not hinder him from working upon his book, the *Institutiones Oratoria*. His regard for his only surviving son, whose happy genius and disposition merited his whole tenderness and attention, was a powerful motive with him for hastening that work, which he considered as the most valuable part of the inheritance he should leave him; in order, says he himself, that if any unforeseen accident should deprive that dear child of his father, he might, even after his death, serve him as a guide and preceptor.² Continually filled therefore with the thought and apprehension of his mortality, he laboured night and day upon his work; and had already finished the fifth book of it, when an early death robbed him of that darling child, in whom his whole joy and consolation were centred. This was to him, after the loss he had already sustained of his youngest son, a calamity that overwhelmed him with anguish and affliction. His grief, or rather despair, vented itself in complaints and reproaches against the gods themselves, whom he loudly accused of injustice and cruelty; declaring, that it was plain, after so cruel and unjust a treatment, which neither himself nor his children had deserved, that

there was no providence to superintend affairs below. Discourses of this kind show in a clear light, what even the most perfect probity of the Pagans was: for I do not know whether all antiquity can instance one man of a more humane, reasonable, wise, and virtuous character than Quintilian, according to the rules of paganism. His books abound with excellent maxims upon the education of children, upon the care which parents ought to take to preserve them from the dangers and corruption of the world, upon the attention masters ought to have that the precious deposit of innocence remain unblemished in them, upon the generous disinterestedness incumbent upon persons in power; and lastly, upon the zeal and love for justice and the public good.

His grief had been very just, if attended with moderation: for never child deserved more to be regretted than he. Besides the graces of nature and exterior attributes, a charming tone of voice, an amiable physiognomy, with a surprising facility in pronouncing the Greek and Roman languages, as if he had been born to excel equally in them both; he had the most happy disposition that could be desired for the sciences, united with a taste and inclination for study that astonished his teachers. But the qualities of his heart were still more extraordinary than those of his head. Quintilian, who had known abundance of youth, declares, with an oath, that he had never seen so much probity of inclination, goodness of soul, sweetness of temper, and elegance of mind, as in this dear child. In an illness of eight months' continuance he showed an evenness and constancy of mind, that his physicians could never sufficiently admire, opposing fears and pains with surprising fortitude, and, upon the point of expiring, consoling his father, and endeavouring to prevent his tears. What a misfortune was it that so many fine qualities were lost! But what a shame and reproach were it for Christian children to be less virtuous!

After having abandoned his studies for some time, Quintilian having recovered himself a little, resumed his work; for which he says, the public ought to have the more favourable opinion of him, as he laboured no longer for himself; his writings, as well as fortune, being to pass away to strangers. He at length finished his plan in twelve books, Ant. J. C. 93. It had cost him little more than two years: of which besides he had employed a great part not in actually composing, but in preparing, and collecting all the matter of which it was to consist, by the perusal of authors who had treated the same subject.³ And we have seen

Musas invocarent, sed provecti quoque longiùs, cum ad aliquem graviorem locum venissent, rejeterent vota, et velut nova precatione uterentur: mihi quoque profectò poterit ignosci, si, quod initio, cum primum hanc materiam inchoavi, non fecerim, nunc omnes in auxilium deos, spemque imprimis, quo neque presentius aliud, neque studiis magis propitium numen est, invocem; ut, quantum nobis expectationis adjecit, tantum ingenii aspiraret, dextere ac volens adsit, et me, qualem esse credidit, faciat.

¹ Lib. x. c. 1.

² Quintil. in Proœra. l. vi.

³ Epist. ad Tryph. bibliop.

how many afflictions and melancholy affairs he had upon his hands during that time. It is astonishing and almost incredible, how so perfect a work could be composed in so short a space. His design was to follow the advice of Horace, who, in his Art of Poetry, recommends to authors not to be in too much haste to publish their writings.⁴ Accordingly he kept his by him, in order to revise them at his leisure, to give time to the first emotions of self-love and the complacency people always have for their own productions to cool; and to examine them no longer with the fond prepossession of an author, but with the temper and impartiality of a reader. He could not long resist the eager desire of the public to have his works, and was in a manner reduced to abandon them to it, contenting himself with wishing them success, and recommending to his bookseller to take great care that they were exact and correct. It must have been at least a year before they could be in a condition to appear. We are obliged to the Abbé Gedoy for having enabled the public to judge of the merit of this author, by the translation he has published of his works.

Mr. Dodwell believes, it was about this time that Quintilian, being no longer employed in composing his great work, which he had lately finished, thought of a second marriage,⁵ and accordingly espoused the grand-daughter of Tullius, as Pliny the younger calls him, Ant. J. C. 94. He had a daughter by her about the end of this year.

Domitian, notwithstanding his pretended divinity, was killed in his palace by Stephanus, who had put himself at the head of the conspirators, Ant. J. C. 96. That emperor had caused Flavius Clemens, then consul, to be put to death, and had banished his niece Flavia Domitilla, the wife of Clemens. He had also banished St. Flavia Domitilla, the daughter of one of the same consul's sisters. All these persons suffered for the faith in Jesus Christ. The death of Clemens hastened that of Domitian, either through the horror and fear it gave every body, or because it animated Stephanus against him, who was the freedman and steward of Domitilla, the wife of Clemens, of whose estate he was obliged to give an account, and was accused of malversation in that respect, Ant. J. C. 98. Nerva succeeded Domitian, and reigned only sixteen months and some days. Trajan, whom he had adopted, was his successor, and reigned twenty years.

Nothing is known of Quintilian from the death of Domitian, except the marriage of his daughter, admitting he had one. When she was of age to marry, he gave her to Nonius Celer. Pliny signalized himself on this occasion by a generosity and gratitude, which in my opinion do him more honour than his writings, excellent as they are. He had studied eloquence under Quintilian. The works he has left us sufficiently prove that he was a disciple worthy of so great a master: but the following fact no less denotes the goodness of his heart, and the remembrance he constantly retained of the services he had received from him. As soon as he knew that Quintilian intended to marry his daughter, he thought it incumbent on him to express his gratitude to his master by a small present. The difficulty was to make him accept it. He wrote him a letter upon that head, that can never be sufficiently admired for its art and delicacy, of which I shall insert a translation in this place.

Pliny's Letter to Quintilian.

"Though the moderation of your mind is very great, and you have educated your daughter as becomes Quintilian's daughter, and the grand-daughter of Tullius: yet, as she is about to marry Nonius Celer, a person of distinction, whose employments in the state impose a kind of necessity upon him for appearing with splendour, it is proper, that she should adapt her dress and equipage to the rank of her husband. These exterior things indeed add nothing to our dignity; they however express and adorn it. I know how very rich you are in the goods of the mind, and that you are much less so in those of fortune than you ought to be. Let me claim therefore a part in your obligations, and, as another father, give our dear daughter fifty thousand sesteria, (12,500 livres)⁶ to which I should add, if I was not assured, that the mediocrity of the present is the sole means to prevail upon your modesty to accept it. *Adieu.*"⁷

This letter of Pliny's has one circumstance in it very much for Quintilian's honour: that after

⁶ About £600 sterling.

⁷ Quamvis et ipse sis continentissimus, et filiam tuam ita institueris, ut decebat filiam tuam, Tullii nepem: cum tamen sit nuptura honestissimo viro Nonio Celeri, cui ratio civilium officiorum necessitatem quandam nitentis imponit; debet, secundum conditiones mariti, veste, comitatu augeri: quibus non quidem augetur dignitas, ornatur tamen et instruitur. Te porro animo beatissimum, modicum facultatibus acio. Itaque partem oneris tui mihi vendico, et, tanquam parens alter puellæ nostræ, confero quinquaginta millia nummum: plus collaturus, nisi à verecundia tua sola mediocritate munusculi impetrari posse considerem, ne recusares. Vale. Ep. 32. l. 6.

⁴ Usus deinde Horatii consilio, qui in arte poetica suadet, ne præcipitur editio, nonumque prematur in ædium; dabam illi otium, ut refrigerato inventionis amore, diligentius repetitis tanquam lector perpendere.

⁵ This second marriage is not certain, but seems very probable.

having publicly employed twenty years with surprising reputation and success, as well in instructing youth as pleading at the bar; after having long resided in the court with young princes, the education of whom ought to have given him, and undoubtedly did give him, great credit with the emperor, he had made no great fortune, and had always remained in a laudable mediocrity. A fine example, but unhappily very seldom imitated! Juvenal however intimates, that Quintilian was very rich, and that he had a considerable number of forests, from which, no doubt, arose a very great revenue.

Unde igitur tot
Quintilianus habet saltus?
Sat. vii. l. 3.

These riches must necessarily have been of later date than the time when Pliny made Quintilian the present we have mentioned, Ant. J. C. 118. It is believed, that if real, they were the effect of the liberality of Adrian, when he attained the empire, for he declared himself the protector of the learned. Quintilian was then seventy-six years old. It is not known whether he lived long after, and history tells us nothing of his death.

II. Plan and Character of Quintilian's Rhetoric.

The rhetoric of Quintilian, entitled, *Institutiones Oratoriae*, is the most complete antiquity has left us. His design in it is to form the perfect orator. He begins with him in his cradle and from his birth, and goes on with him through all the stages of life to the grave. This rhetoric consists of twelve books. In the first he treats of the manner in which children should be educated from their earliest infancy; whence he proceeds to grammar. The second lays down rules to be observed in the schools of rhetoric, and solves several questions in regard to the art itself, as whether it be a science, whether useful, &c. The five following books contain the rules of invention and disposition. The eighth, ninth, and tenth books include all that relates to elocution. The eleventh, after a fine chapter upon the manner of speaking with propriety as an orator, *de aptè dicendo*, treats of memory and pronunciation. In the twelfth, which is perhaps the finest of them all, Quintilian lays down the personal qualities and obligations of an advocate, as such, and with regard to his clients; when he ought to quit his profession; and how employ his retirement.

One of the peculiar characters of Quintilian's rhetoric is, its being written with all the art, elegance, and energy of style it is possible to imagine. He knew, that precepts when treated

in a naked, simple, and subtle manner, are only proper to dry up the sources of the mind, and, if I may use the expression, to make discourse lean and languid, by depriving it of all grace and beauty, and leaving it nothing but nerves and bones, more like a skeleton than a healthy and natural body.¹ He therefore endeavoured to introduce into his Institutions all the ornament and elegance of which such a work was susceptible² not, as he says himself, with the view of displaying his wit, (for he could have chosen a far more fruitful subject for that purpose) but that youth, from the attraction of pleasure, might apply themselves with more ardour to the reading and studying of his precepts, which without grace and ornament, could not fail, in offending the delicacy of their ears, to disgust also their minds. Accordingly we find in his writings a richness of thoughts, expressions, images, and especially comparisons, which a lively imagination, adorned with a profound knowledge of nature, continually supplies, without ever exhausting itself, or falling into disagreeable repetitions: comparisons, which throw such a fulness of light and beauty into precepts, often obscure and disgusting in themselves, as give them a quite different spirit and effect.

The principal end of Quintilian, in his rhetoric, was to oppose the bad taste of eloquence, that prevailed in his time, and revive a manner of thinking and judging more sound and severe, and more conformable to the rules of the elegance of nature.³ Seneca had contributed more than any other author to vitiate and corrupt the judgment of the Roman youth, and to substitute in the place of that manly and solid eloquence, which had prevailed till his time, the prettinesses, if I may be allowed to call them so, of a style surfeited with ornaments, glittering thoughts, quaint conceits, antithesis, and point. He perceived aright, that his⁴ works would

1 Pierumque nude illæ artes, nimia subtilitatis affectatione frangunt atque concidunt quicquid est in oratione generosius, et omnem succum ingenii bibunt, et ossa detegunt: quæ ut esse et astringi nervis suis debent, sic corpore operienda sunt. *Quintil. in Proem. l. 1.*

2 In ceteris admiscere tentavimus aliquid historiarum, non jactandi ingenii gratia (namque in id eligi materia poterat uberior) sed ut hoc ipso alliceremur magis juventutem ad cognitionem eorum quæ necessaria studiis arbitrabamur, si ducti jucunditate aliqua lectionis, libentius discerent ea, quorum ne jejuna atque arida traditio averteret animos, et aures (præsertim tam delicatas) raderet, verebimur. *Quintil. l. iii. c. 1.*

3 Quod accidit mihi, dum corruptum et omnibus vitiis fractum dicendi genus revocare ad severiora judicia cuncto. *Quintil. l. x. c. 1.*

4 Tum autem solus hic ferè in manibus adolescentium fuit. Quem non equidem omnino conabar excutere, sed potioribus præferri non sinebam, quos ille non destituerat incessere, cum diversi sibi consilii generis, placere se in dicendo posse ita, quibus illi placerent, diffideret. *Ibid.*

never please those who admired the ancients: for which reason he never ceased to speak ill of, and discredit them, even the authors who were most esteemed, as Cicero and Virgil. In consequence of this conduct an almost universal contempt for them ensued; so that when Quintilian began to teach, he found no author but Seneca in the hands of youth. He did not endeavour absolutely to exclude him; but could not suffer his being preferred to writers of incomparably greater merit.

For the rest we ought not to be surprised that this bad taste made so rapid a progress in so short a time: which is indeed no more than what usually happens. There wants but a single person of a certain character to vitiate all the rest, and to corrupt the language of a whole nation. Such was Seneca.⁵ I omit speaking in this place of the other qualities, for which he was admired: a happy and universal genius; a vast extent of knowledge; a profound erudition in philosophy; and a morality abounding with the justest and most solid principles. To keep within the bounds of my subject, he had an easy and exuberant wit, a fine and rich imagination, a shining facility in his compositions, solid thoughts, expressions curious and full of energy, with happy and sprightly turns and conceits. But as to his style it was almost vicious in all its parts, and so much the more dangerous, as it was all over luxuriant with charming faults and beautiful defects.⁶

This florid style, this taste for point and quaintness, the more dangerous as the more easy and affecting, and therefore the more conformable to the character of youth, soon seized the whole city. It became necessary that every proof and every period should conclude with some glittering thought, or singular and surprising turn, to strike the ear, attract particular attention, and in some measure claim applause.⁷ Quintilian believed himself obliged to attack this bad taste with the utmost vigour; which he does almost throughout his whole work, by laying down, upon the model of the ancients, the principles of true and solid eloquence. It is not, as he often declares, and as his style sufficiently shows, because he was an enemy to the beauties and graces of discourse. He confesses that Cicero himself, to defend his clients, employed not only strong but shining arms; and that in the cause of Cornelius Balbus, in which

he was often interrupted by the applauses and universal clapping of hands of his auditors, sublimity, pomp, and glitter of eloquence occasioned those loud acclamations.⁸ He adds to this motive a very true and judicious reflection, which seems to regard only the orator's reputation: this is, that the beauty of speech conduces very much to the success of a cause, because those who hear with pleasure are more attentive, and become more inclined to believe what they hear, won over as they are by the charms of discourse, and sometimes in a manner borne away by the general admiration. Quintilian therefore does not reject ornaments: but he insists that eloquence, which is an enemy to paint, and all borrowed graces, admits no dress but what is manly, noble, and majestic.⁹ He consents, that it should shine and be lovely, but from health, if I may be allowed the expression, and that it should owe its beauty solely to its natural vigour and florid complexion. He carries this principle so far as to say, that were he to choose, he should prefer the rough, gross force of the ancients, to the studied and effeminate affectation of the moderns.¹⁰ But, says he, there is in this point a certain mean that may be observed, in like manner as there is a neatness and elegance at present in our tables and furniture, which is so far from being reprovable, that we ought, to the utmost of our power, to make it become a virtue in the general acceptance.

We find by the little I have related of Quintilian, how greatly useful the study of such a work may be to form the judgment of youth. It is no less so in respect to the manners. He has scattered admirable maxims of that nature throughout his rhetoric. I have quoted part of them in my treatise upon study.

But this fund of probity, so worthy in itself of our highest praises, is much dishonoured by our rhetorician's impious flatteries in regard to

8 Nec fortibus modo sed etiam fulgentibus armis præliatus in causa est Cicero Cornelii: qui non asecutus esset docendo Judicem tantum, et utiliter demum ac Latine perspicueque dicendo, ut populus Romanus admirationem suam; non acclamatione tantum, sed etiam plausu confiteretur. Sublimitas profecto, et magnificentia, et nitor, et auctoritas expressit illum fragorem.— Sed ne causæ quidem parum confert hic orationis ornatus. Nam qui libenter audiunt, et magis attendunt, et facilius credunt, plerumque ipsa delectatione capiuntur, nonnquam ipsa admiratione auferuntur. *Quintil.* l. viii. c. 3.

9 Sed hic ornatus, (repetam enim) virilis, fortis, et sanctus sit: nec effeminatum levitatem, nec fuco eminentem colorem amet: sanguine et viribus nitent. *Quintil.* *Ibid.*

10 Et, si necesse sit, veterem illum horrorem dicendi malim, quam istam novam licentiam. Sed patet media quedam via: sicut in cultu victique accessit aliqui citra reprehensionem nitor, quem, sicut possumus, adjiciamus virtutibus. *Ibid.* c. 5.

5 *Quintil.* l. x. c. l.

6 Sed in eloquendo corrupta pteraque, atque eo perniciosissima, quod abundant dulcibus vitia. Velles cum suo ingenio dixisse, alieno iudicio.

7 Nunc illud volunt, ut omnis locus, omnis sensus in fine sermonis feriat aurem. Turpe autem ac prope nefas ducunt, respirare ullo loco qui acclamationem non petiit. *Quintil.* l. viii. c. 5.

Domitian, and by his despair on the death of his children, that rose so high as to deny providence. This example, and many others of a like nature, instruct us how to think of these pagan virtues, which were solely founded in self-love, and of a religion that afforded no resource against the losses and evils to which human life is continually exposed.

III. *Method of Instructing Youth in Quintilian's Time.*

Before I conclude this article upon Quintilian, I shall extract from his writings part of what relates to the manner of teaching, as used at Rome, in his time.

It appears to have been a very usual custom at Rome, not to begin the instruction of children till they were seven years old, because it was believed, that before that age they had neither sufficient strength of body nor extent of mind for learning.¹ Quintilian thinks otherwise, and prefers the opinion of Chrysippus, who had composed a treatise of considerable extent, and in great esteem, upon the education of children. Though that philosopher allowed three years to the nurses, he was from that age for having them industriously imbued with good principles of morality, and formed insensibly for virtue. Now, says Quintilian, if from that early state their manners may be cultivated, what hinders but their minds may also be improved? What is a child to do from the time he begins to speak? For undoubtedly he must do something. Is it proper to abandon him entirely to the discourses of women and men-servants? At that age we know he is incapable either of pains or application. Therefore this must not be so much a study as a play, whereby these first years of infancy, till the seventh, which are generally lost, may be usefully applied in teaching him a thousand agreeable things within the reach of his capacity.

They began with the study of the Greek language:² but that of the Latin soon followed; from which time they cultivated both languages with equal application. This is not practised with sufficient regularity among the French, [or indeed the English,] who seldom or never know their native tongue by principles.

When children had learnt to read well, and to write correctly, they were taught both the Latin and Greek grammars. They had, for this end, private masters who instructed them at home, and others who taught in the public schools. Quintilian examines which of these two methods of teaching is the most useful; and, after having attentively considered the rea-

sons on both sides, he declares for the public schools. The chapter wherein he treats this question, is one of the finest parts of his work.

Grammar was not considered in those times as a frivolous employment of little importance.³ The Romans set a higher value upon it, and applied themselves to it in a particular manner; convinced, that to propose making a progress in the sciences without the assistance of grammar, is like intending to erect a building without a foundation. They did not dwell upon minute things and subtleties, which serve only to cramp the genius, and make the mind dry and frigid; they studied its principles, and examined its reasons, with care; for there is nothing hurtful in grammar, but what is useless.

Grammar, that is to say, the art of writing and speaking correctly, turns upon four principles: reason, antiquity, authority, and use. Quintilian says an admirable thing upon this last head. This word *Use*,⁴ according to him, requires an explanation, and it is necessary to define precisely what we understand by it. For, if we take it for what we see done by the generality of people, the consequences would be dangerous, not only in regard to language, but what is more important, in respect to manners. For, says he, can it be expected among men to see the generality follow or use what is best, and according to rule? He repeats several customs very common in his time, which ought not to be considered as uses but as abuses, though generally practised by the whole city. We shall call *use* therefore, as it relates to language, that which is received by the consent of such as speak best; as, in regard to manners, that is *use*, which has the approbation of the good and worthy.

The care of teaching children to read and write correctly, and of learning them the principles of the Greek and Latin tongues, was the first but not the chief duty of grammarians.⁵ They added to this the reading and explication of the poets, which was of exceeding great extent, and required profound erudition. They did not content themselves with making children observe the propriety and natural signi-

3 L. i. c. 4.

4 Ibid.

5 Sed huic ipsi necessarium est iudicium, constitutumque imprimis id ipsum quid sit, quod consuetudinem vocemus. Que si ex eo quod plures faciunt nomen accipiat, periculosissimum dabit preceptum, non orationi modo, sed (quod majus est) vite. Unde enim tantum boni, ut pluribus que recta sunt placeant? Igitur ut velli, et comam in gradus frangere, et in balneis perpotare, quamlibet hæc invaserint civitatem, non erit consuetudo, quia nihil horum caret reprehensione—sic, in loquendo, non, si quid vitiosè multis inderit, pro regula sermonis accipiendum erit.—Ergo consuetudinem sermonis, vocabo consensum eruditorum; sicut vivendi, consensum bonorum. *L. ib. l. i. cap. 4.*

6 L. i. c. 5.

1 Quintil. l. i. c. 1.

2 Ibid.

sification of words; the different feet in the construction of verses; the turns and expressions peculiar to poetry, with the tropes and figures. They applied themselves principally in showing what it was necessary to remark in the economy or conduct of a piece, and the consistency of its parts and characters; what was fine in the thoughts and diction; and wherefore the style was sometimes flowing and luxuriant, and sometimes succinct and concise. They made children also perfectly acquainted with whatever had any relation, in the poets, either to fable or history, without however charging their memories with any thing useless. At least, these are the rules prescribed by Quintilian. He reckons it a perfection in a grammarian, to be ignorant of certain things, which indeed do not deserve to be known.⁷

The grammarians began also to form youth for composition, by making them write descriptions, fables, and more extensive narrations.⁸ They sometimes made excursions, of which Quintilian complains, into the province of rhetoric, and made their disciples compose discourses, not only in the demonstrative kind, which seemed abandoned to them, but even in the deliberative.¹⁰ At the same time that youth learnt grammar, they were also taught music, geometry, the manner of dancing that improves the person and mien, and the art of pronunciation, or of speaking in public; all which were considered as essential to the future orator, and always preceded the study of rhetoric.¹¹

The age for entering upon this study was not and could not be fixed, because it depended on the progress made in the previous studies. What we certainly know of it, is, that young persons devoted several years to it: *Adulti ferè pueri ad hos præceptores transferuntur, et apud eos juvenes etiam facti perseverant.*¹² We may conjecture, that they generally began rhetoric at thirteen or fourteen years of age, and continued at it till seventeen or eighteen. The length of time employed in this study ought not to surprise us, because at Rome as well as Athens, eloquence opening the door to the highest dignities of the republic, this art was the principal employment of the youth of both cities. We must not forget, that at Rome they studied rhetoric under both Greek and Latin masters.

The function of a rhetorician included two parts: precepts and declamations.

Quintilian, in several passages of his work, proves the utility and necessity of precepts: but he is far from believing, that a scrupulous observance of them is indispensably necessary in composing. Rhetoric would certainly be very easy and attainable, if it could be made to consist in a small number of fixed and certain rules; but its rules change according to time, occasion, and necessity. For which reason the principal requisite in an orator is judgment, because he is to determine differently his own conduct, according to the exigency of affairs.¹³

The rhetorician dictated the precepts to his disciples, which must have taken up abundance of time: for the rhetorics were generally very long, as we may conclude from that of Quintilian. It often treated subjects of a very abstract, and very improper nature in my opinion, to inspire a taste for eloquence. These are that kind of passages, which, in regard to youth, I have taken the liberty to retrench in my edition of this rhetorician. He found this custom established, and could not with prudence depart from it. But he makes his readers good amends, not only by the graces and beauties of style diffused through all the passages susceptible of them, but still more by the solid reflections, with which he unites most of his precepts. And, when he explained them to his disciples, what force and clearness must his pronunciation have added to them!

To teach youth how to practise the precepts he had explained to them, the master formed them for composition.¹⁴ At first they made historical narrations. They then rose to praising of great men, and blaming such as had rendered themselves odious by their criminal actions; and sometimes made parallels and comparisons between them. They exercised themselves also in commonplaces, upon avarice, ingratitude, and the other vices in general: and in certain themes which supplied abundant matter for eloquence; for instance, whether the country life is preferable to that of the town; whether most glory be acquired in the field or at the bar. Care was also taken to exercise the memory.¹⁵ Quintilian for this end is for having youth learn by heart select passages out of the orators, historians, and other celebrated authors: the poets were left wholly to the grammarians. They will form their taste early by this means, says he; their memory will constantly supply them with excellent models, which they will imitate even without thinking of it: expressions, turns of thoughts and figures, will rise up with no constraint under their pens, and present themselves

⁷ *Præcipuè vero illa infigat animis, quæ in œconomia virtus, quæ in decoro rerum; quid personæ cuique convenit; quid in sensibus laudandum, quid in verbis; ubi copia probabilis, ubi modus.*

⁸ *Ex quo mihi inter virtutes Grammatici habebitur, aliqua nescire.*

⁹ L. i. c. 6.

¹¹ L. i. c. 7, &c.

¹⁰ L. ii. c. 1.

¹² L. ii. c. 2.

¹³ *Atque adeo res in oratore præcipue consilium, quia variè et ad rerum momenta convertitur.* Lib. ii. c. 14.

¹⁴ Lib. ii. c. 4.

¹⁵ *Ibid.* c. 8.

as treasures carefully reserved against occasion.¹

By these different exercises, they were insensibly led on to the composition of discourses in form, called declamations, in which the principal business of rhetoric consisted.² These were harangues composed upon feigned and imaginary subjects, in imitation of those at the bar, and in the public deliberations. Demetrius Phalereus was the first who introduced the use of them among the Greeks.

Declamations were instituted to prepare youth for the real affairs of the bar, of which they were properly to be a faithful resemblance; and as long as they kept within these just bounds, and perfectly imitated the form and style of actual pleadings, they were of great use. Accordingly this sort of composition comprised all the parts and beauties of a coherent discourse. But this exercise, so useful in itself, degenerated so much through the ignorance and bad taste of masters, that declamations were one of the principal causes of the ruin of eloquence. They made choice of fabulous subjects, entirely extraordinary and unnatural, which had no manner of relation to the matters treated at the bar. I shall cite a single example of this kind, from which the rest may be known.³ There was a law which decreed, that the hands of him who struck or used violence to his father should be cut off. *Qui patrem pulsaverit, manus ei prædantur.* A tyrant, having caused a father and his two sons to be brought to him in the citadel, ordered the sons to beat the father. One of them, to avoid so horrid an impiety, threw himself headlong from the works of the citadel: the other, compelled by necessity, obeyed the command, and struck his father; he afterwards killed the tyrant, who had made him his friend, and received the reward granted him by the laws in such a case. He was however tried by the judges for having used violence to his father, and the prosecutor demanded that his hands should be cut off. The father takes upon him his defence. Matters of a much more extravagant nature were treated in declamations. The style was suitable to the choice of the subjects, and consisted of nothing but stiff, far-fetched expressions, glittering conceits, points, antitheses, quibbles, and jingle, strained figures, frothy bombast,⁴ in a word, of all manner of puerile orna-

ments, crowded together without judgment or choice.

Quintilian opposed this bad taste with the utmost zeal, and applied himself to reforming declamations, by reducing them to their original design, and making them conformable to the practice of the bar. Believing it improper, however, to oppose the torrent of custom in a direct manner, he abated of his ardour in some respects, and gave way to the stream in a certain degree. It will not be disagreeable to see in what manner he justifies this condensation himself. "What then, some one may say, are youth never to be suffered to treat extraordinary subjects? To give a loose to their genius, to abandon themselves to the sallies of a warm imagination, and swell a little in their style and eloquence? That is undoubtedly right," says Quintilian. "But then let them keep at least to what is justly bold and swelling; and not give into what is ridiculous and extravagant to all who have any sense or discernment. In fine, if we must have this indulgence for declaimers, let them swell as much as they please, provided they remember, that as certain animals are turned loose into the fields to fatten upon the luxuriant herbage for a certain time, and afterwards are let blood, and return to their usual meat for the preservation of their vigour; so they ought to distrust their fulness, and retrench its vicious superfluities, if they would have their productions really sound and vigorous. Otherwise, on their first attempts in public, they will find that imaginary fulness and abundance no more than empty swell and tumour."⁵

With such wise precautions, declamations might be of great use to young persons. Perfect discourses are not to be required or expected from them at first.⁶ A fruitful and abundant genius may be known from a boldness and spirit

ideo ego adolescentulus existimo in scholis stultissimos fieri, quia nihil ex his, quæ in usu habemus, aut audiunt, aut vident — sed mellitos verborum guttulos, et omnia dicta factaque quasi papavere et sesamo aspara. *Petrus in init.*

5 Quid ergo? Nunquam hæc supra fidem, et poeticæ (ut verè dicam) themata juvenibus pertractare permittemus, ut expatiantur, et gaudeant materia, et quasi in corpus cant? Erat optimum. Sed certè sint grandia et tumida, non stulta etiam, et acrioribus oculis intuenti ridicula. Ac, si jam cedendum est, impleat se declamator aliquando, dum sciat, ut quadrupes, cum viridi pabulo distentæ sunt, sanguinis detractone curantur, et sic ad cibos viribus conservandis idoneos redeunt: ita sibi quoque tenuandos adipem, et quicquid humoris corrupti contraxerit, emittendum, si esse sanus ac robustus volet. Alioqui, tumor ille inanis primo cuiusque veri operis conatu deprehendetur. *Lb. ii. c. 11.*

6 In pueris oratio perfecta nec exigi, nec sperari potest: melior autem est indoles læta, generosique conatus, et vel plura iusto concipiens interim spiritus. Nec unquam cum in his discens annis offendat, si quid superfluerit. *Lb. ii. c. 4.*

1 Sic assuescent optimis, semperque habebunt intra se quod imitentur: etiam non sentientes, sormam illam, quam mente penitus acceperint, expriment. Abundant autem copiâ verborum optimorum, et compositione, ac figuris jam non quaesitis, sed sponte et ex reposito velut thesauro se offerentibus.

2 *Lb. ii. c. 4.*

3 *Senec. Declam. iv. l. 9.*

4 Hæc tolerabilia essent, si ad eloquentiam iturâ viam facerent: nunc et rerum tumore, et sententiarum vanissimo strepitu, hoc tantum proficiunt, ut, cum in forum venerint, putent se in alium terrarum orbem delatos. Et

in attempting, though not always within the bounds of the just and the true. It is good to have always something to retrench at these years. When a young person had worked in private upon a subject given him to treat, he brought his composition to the school, and read it before his companions. The master sometimes, to render them more attentive, and to form their judgment, asked them what they thought worthy of either praise or blame in the piece read to them. He afterwards determined the manner in which they were to judge of it, as well in regard to the thoughts, as the expression: he pointed out the passages that were either to be made more clear, or to be enlarged or abridged; always softening his criticism with an air of kindness, and sometimes even with praise, in order to its being the better received. "For my part," says Quintilian, "when I observed young persons either too wanton and luxuriant in their style, or more bold than solid in their thoughts; I told them, for the present I would suffer it, but the time would come when I should not permit the taking of such liberties. And thus they were pleased with their wit, without being deceived on the side of their judgment."

When the youth, upon the advice of his master, had carefully retouched his piece, he prepared to pronounce it in public; and this was one of the greatest advantages derived from the study of rhetoric, and at the same time one of the most laborious exercises for the master, as the satirist observes:

Declamare doces, oh ferrea pectora, Vecti!

Juv. Sat. 7.

With iron lungs who teaches to declaim.

The relations and friends of the speakers assembled on these occasions, and it was the height of joy to fathers to see their sons succeed in these declamations, which prepared them for pleading, and enabled them to distinguish themselves in time at the bar.

Among the different exercises of rhetoric, there is reason to be surprised, that nothing is said of the reading and explaining of good authors, which alone is capable of forming entirely the taste of youth, and of teaching them to compose well. Quintilian⁹ confesses, that this was not practised at the time he began to teach rhetoric. He was sensible of all its advantages from the first, and exercised some young persons in it, whom he instructed in private, in consequence of their parents' request: but having found the contrary custom established in the schools, he was afraid to depart from the ancient method;

so much force and dominion has custom over the mind of man! Convinced of the vast importance of this practice with regard to youth, he recommends it industriously in his oratorical institutions: and as the grammarian's business was to explain the poets to them, he is for having the rhetorician do the same in respect to the orators and historians, but especially the former, in reading them with the pupils, and making them sensible of all their beauties; and he prefers this exercise far before all the precepts of rhetoric, how excellent soever they may be; examples being infinitely more improving in his opinion.⁹ For, says he, what the rhetorician contents himself with teaching, the orator sets before the eyes. The one points out the road youth are to take, the other in a manner leads them by the hand all the way. *Quæ doctor præcipit, orator ostendit.*¹⁰

I have perhaps enlarged a little too much upon what relates to this excellent master of rhetoric, from whom I have cited many passages, for which I ought to make some excuse to the reader. I desire him therefore to pardon my too manifest prejudice and passion for Quintilian, who is my favourite author, and whose writings have been the subjects of my lessons in the royal college more than forty years. I confess, that I am charmed and transported whenever I read his books, which always seem new to me; and I set the higher value upon them, as I know no author more capable of preserving youth against the false taste of eloquence, which seems in our days to aspire at superiority and dominion.

Several Saints have taught rhetoric, and have done honour to their profession by their profound knowledge, and still more by their solid piety: St. Cyprian, St. Gregory Nazianzen, St. Augustine, &c. The last mentions¹¹ a celebrated rhetorician, named Victorinus, to whom a statue was erected at Rome, where the learned instruction he had given the children of the most illustrious senators had acquired him great reputation. The affecting history of his conversion, (for he had courageously renounced paganism for the christian religion) contributed very much to that of St. Augustine.

CHAPTER V.

OF SOPHISTS.

In the subject I am now to treat, I have made great use of Mr. Hardion's work upon the *Origin and Progress of Rhetoric amongst the Greeks*, of which only a small part has been published.

⁷ Solebam ego dicere pueris aliquid ausis licentius aut lætius, laudare illud me adhuc; venturum tempus, quo idem non permitterem. Ita, et ingenio gaudebant, et judicio non fallabantur. *Ibid.*

⁸ L. li. c. 3.

⁹ Hoc diligentæ genus ausim dicere plus collatum discentibus, quam omnes omnium artes—Nam in omnibus ferè minus valent præcepta, quam exempla. *Lb. li. cap. 5.*

¹⁰ L. x. c. 1.

¹¹ Confess. l. viii. c. 2.

It is hard to give a just idea and exact definition of sophists, because their condition and reputation have undergone various changes. It was at first a very honourable title. It afterwards became odious and contemptible from the vices of the sophists, and the abuse they made of their talents. At length the same title, in a manner restored to its privileges by the merit of those who bore it, continued in honour for a considerable succession of ages, which did not however prevent many of them, even in those times, from making an ill use of it.

The name of Sophist among the ancients was of very great extent, and was given to all those whose minds were adorned with useful and polite learning, and who imparted their knowledge to others, either by speech or in writing, upon any science or subject whatsoever. Hence we may judge how honourable this character was at first, and what respect it must have drawn upon those, who, distinguishing themselves by a superior merit, made it their business to form mankind for virtue, science, and the government of states. The greatest proof which can be given, says Isocrates, of the singular estimation in which the sophists were held, is, that Solon, who was the first Athenian called sophist, was judged worthy by our ancestors of being placed at the head of the republic. Herodotus¹ reckons him amongst the sophists, whom the opulence of Cræsus, and his love for the polite arts, had brought to his court.

When by the defeat of Cræsus, Asia Minor was subjected to the arms of the Persians, most of the sophists returned into Greece, and the city of Athens became, under the government of Pisistratus and his children, the darling asylum and residence of the learned.

To understand aright the advantage they were of to Greece, we have only to remember the important services they rendered Pericles in regard to policy and government.

All arts, whose objects are great and considerable, require a genius for discussion, and a profound knowledge of nature.² The mind is thereby accustomed to conceive lofty and sublime thoughts, and enabled to attain its perfection. Pericles united with the most happy natural talents this habit of meditating and discussing. Having fallen into the hands of Anaxagoras, who followed this method in every thing, he learned from him to trace things to their principles, and applied himself particularly to the study of nature.³ History tells us the use he made of it on the occasion of an eclipse of the sun, which had thrown his whole fleet into a consternation. Anaxagoras, who abounded in

this kind of knowledge, made it the principal subject of his conversations with Pericles, who knew how to select from them what was proper, to apply it to rhetoric.

Damon, who succeeded Anaxagoras with Pericles, called himself only a musician, but concealed profound learning under that name and profession.⁴ Pericles passed whole days with him, either to improve the knowledge he already had, or to acquire more.⁵ Damon was the most amiable man in the world, and never wanted abundant resources upon whatever subject he was consulted. He had studied nature profoundly, and the effects of the different kinds of music. He composed excellently himself, and all his works tended to inspire horror of vice and love of virtue. Whatever care this sophist had taken to conceal his real profession, his enemies, or rather those of Pericles, perceived at length that his lyre was only assumed to disguise him from their sight. From that time they used all means to discredit him with the people. They painted him as an ambitious turbulent person, who favoured tyranny. The comic poets seconded them to the utmost of their power, by the ridicule they vented against him. He was at length cited to answer for himself before the judges, and banished by the ostracism. His merit and attachment to Pericles were his only crimes.

That illustrious Athenian had also another teacher both in eloquence and policy, whose name and profession must give surprise: this was the famous Aspasia of Miletus.⁶ That woman, so much celebrated for her beauty, knowledge, and eloquence, was at the same time of two very different professions, a courtesan and a sophist. Her house was frequented by the gravest personages of Athens. She gave her lessons of eloquence and policy with so much politeness and modesty, that the husbands were not afraid to carry their wives thither, where they might be present without shame or danger.

In her conduct and studies she followed the example of another famous courtesan of Miletus, named Thargelia, whose talents had acquired her the title of sophist, and whose exceeding beauty had raised her to the height of grandeur. When Xerxes meditated the conquest of Greece, he engaged her to employ the charms of her person and wit, to bring over several of the Grecian cities to his side, in which she succeeded effectually. She at length settled in Thessaly, where the sovereign married her, and she lived thirty years upon the throne.

Aspasia with abundance of wit and beauty united a profound knowledge of rhetoric and policy. Socrates boasted, that it was to her in-

¹ L. i. c. 29.

² Plato in *Phædr.* p. 260.

³ Plut. in *Pericl.* p. 154.

⁴ Plut. in *Pericl.* pp. 153, 154. ⁵ Plut. in *Lach.* p. 180.

⁶ Plut. in *Pericl.* pp. 163, 169. Athen. l. xiii. p. 608. Hesych. in voce Θαγγησία. Suid. ibid.

structions he was indebted for all his eloquence, and ascribed to her the merit of having formed all the great orators of his time.⁷ He intimates also in Plato, that Aspasia had the greatest share in composing the funeral oration, pronounced by Pericles in praise of the Athenians, who fell in battle for their country, which appeared so admirable, that when he had done speaking, the mothers and wives of those he had praised, ran to embrace and crown him with wreaths and fillets, as a champion victorious in the games.

Pericles was in no good understanding with his wife, who consented without any difficulty to be divorced from him. After he had married her to another, he took Aspasia in her stead, and lived with her in the most perfect union. She was a long time the mark of the poets' satiric wit, who in their comedies drew her sometimes under the name of Omphale, sometimes of Dejanira, and sometimes under that of Juno. It is not certain whether it was before or after her marriage that she was accused before the judges for the crime of impiety.⁸ It is only said, that Pericles saved her with great difficulty, and that he exerted all his credit and eloquence in her defence. It is a pity that Aspasia dishonoured by the irregularity of her manners, and her profession of a courtesan, the many fine qualities, for which she was otherwise so estimable, and which without that blot, would have made her an honour to her sex. But they prove, however, of what the sex is capable, and how high females can carry the talents of the mind, and even the science of government.

Besides Anaxagoras, Damon, and Aspasia, who had principally instructed Pericles in eloquence and policy, he had also several other sophists of great reputation in his house. This conduct shows the value, which the great men of antiquity set upon, and the use they made of, the sciences, which they were very far from considering as a simple amusement, fit only at most to gratify the curiosity of a speculative mind with rare and abstract knowledge, but incapable of forming persons for the government of states.

The extraordinary honours paid by all Greece to the sophists, proves how highly they were esteemed. When they arrived at a city, they were met by the people in a body, and their entrance into it had something of the air of a triumph.⁹ They had their freedom conferred upon them, were granted all sorts of immunities, and had statues erected to their honour. Rome erected one to the sophist Proceres, who went thither by order of the emperor Constantius.¹⁰

Nothing can be imagined more glorious or more soothing than the inscription of this statue: *Regina rerum Roma Regi eloquentia*; that is, "Rome the queen of the world to the king of eloquence."

The experience which most of the cities had made of the advantage of the sophists to those in the administration of public affairs, and especially in the instruction of youth, occasioned their being treated with all these singular marks of esteem and distinction. Besides which, it cannot be denied, that many of them had abundance of wit, had acquired a great extent of knowledge by application, and distinguished themselves in a particular manner by their eloquence. The most celebrated were Gorgias, Tisias, Protagoras, and Prodicus, who all appeared in the time of Socrates.

GORGIAS is surnamed the *Leontine*, because he was a native of Leontium, a city of Sicily. His citizens, who were at war with those of Syracuse, deputed him as the most excellent orator among them, to implore aid of the Athenians, whom he charmed by his eloquence, and obtained from them all he demanded.¹¹ As it was new to them, they were dazzled with the pomp of his words, thoughts, genius, and figures; and with those artfully laboured, and in a manner wire-drawn periods, the members of which, by a studied disparity and resemblance, answer each other with a nice exactness, and form a regular and harmonious cadence, that agreeably soothes the ear.¹² This kind of *prettiness*, for it cannot well be called by any other name, is pardonable when not too frequent, and is even graceful when used with the sober temper with which Cicero employs it. But Gorgias abandoned himself to it without any reserve. Every thing glittered in his style, in which art seemed to pride itself in appearing everywhere without a veil. He went to display it upon a much larger theatre, namely, in the Olympic games, and afterwards in the Pythian; where he was equally admired by all Greece. They loaded him universally with honours, which they carried so far, as to erect him a statue of gold at Delphos, an honour never before conferred on any man.¹³ Gorgias was the first who ventured to boast in a numerous assembly, that he was ready to dispute upon any subject that should be proposed: which became very common afterwards.¹⁴ Crassus had

¹¹ Diod. l. xii. p. 106.

¹² *Paria paribus adjuncta, et similiter definita; itemque contrariis relata contraria que sua sponte, etiamsi id non agas cadunt plerumque numeroso* Gorgias prius inveniit, sed his est usus intemperanter. *Orat.* n. 175.

¹³ Gorgias tantus honos habitus est à tota Græcia, soli ut ex omnibus, Delphis, non inaurata statua sed aurea statuereetur. *3 De Orat.* n. 127.

¹⁴ *1 De Orat.* n. 112.

⁷ Plut. in Menex. p. 236—240.

⁸ Plut. in Peric. p. 169.

⁹ S. Chrys. in Epist. ad Ephes.

¹⁰ Eunapius.

reason to treat so senseless a vanity, or rather, as he calls it himself, so ridiculous an impudence with derision. He lived to an hundred and seven years old, without ever quitting his studies;¹ and upon being asked how he could support so long a life, he replied, that age had never given him any reason to complain. Isocrates, of all his disciples, was the most illustrious, and did him the greatest honour.

TISIAS was a native of the same city as Gorgias, and according to some, was joined with him in the deputation to the Athenians.² He also acquired great estimation. Lysias, a famous orator, of whom I shall speak in the sequel, was one of his disciples.

PROTAGORAS, of Abdera in Thrace, was cotemporary with Gorgias, and perhaps even a little prior to him.³ He was also of the same taste, and had, like him, a very great reputation for eloquence. He taught it during forty years, and gained by his profession more considerable sums than Phidias, or ten as excellent statuary as him, could ever have been able to have acquired. So Socrates says in Plato.

Aulus Gellius⁴ relates a very singular lawsuit between this Protagoras and one of his disciples. The latter, whose name was Evalthus, passionately desirous of making himself a celebrated advocate, applies to Protagoras. The price was agreed on; for these masters always began with that; and the rhetorician engaged to instruct Evalthus in the most secret mysteries of eloquence. The disciple, on his side, pays down directly half the sum agreed on, and according to articles, refers the payment of the other half, till after the carrying of the first cause he should plead. Protagoras, without loss of time, displays all his precepts, and after a great number of lessons, pretends that he had made his scholar capable of shining at the bar, and presses him to make an essay of his ability. Evalthus, whether out of timidity or some other reason, always defers it, and obstinately declines exercising his new talent. The rhetorician, weary of his continued refusal, has recourse to the judges. Then, sure of the victory, whatever sentence they might pass, he insults the young man. For, says he, if the decree be in my favour, it will oblige you to pay me: if against me, you carry your first cause, and are my debtor according to our agreement. He believed the argument unanswerable. Evalthus was in no concern, and replied immediately, I accept the alternative. If judgment goes for me, you lose your cause: if for you, I am discharged by our articles; I lose my first cause, and from that moment the obligation ceases.

The judges were posed by this captious alternative, and left the case undecided: in all probability Protagoras repented his having instructed his disciple so well.

PRODICUS of the Isle of Cea, one of the Cyclades, the cotemporary with Democritus and Gorgias, and disciple of Protagoras, was one of the most celebrated sophists of Greece.⁵ He flourished in the 86th Olympiad, and among others had Euripides, Socrates, Theramenes, and Isocrates, for his disciples. He did not disdain to teach in private at Athens, though he was there in the character of ambassador from his country, which had already conferred several other public employments upon him; and though the great approbation, which his harangue had obtained him from the Athenians upon the day of his public audience, seemed to oppose his descending to use his talent upon less occasions, Plato insinuates, that the desire of gain induced Prodicus to keep a school. He accordingly enriched himself considerably by that business. He went from city to city to display his eloquence, and though he did it in a mercenary manner, he, however, received great honour at Thebes, and still greater at Lacedæmon.

His declamation of *fifty drachmas* is very much spoken of, which was so called, as some of the learned tell us, from each auditor being obliged to pay him that sum, amounting to about twenty-five livres French.⁶ This was paying very dear for hearing a harangue. Others understand it of a lecture, and not a harangue. Socrates, in one of Plato's dialogues, complains with his air of ridicule, of not being able to discourse well upon the nature of nouns, because he had not heard the lesson of fifty drachmas,⁷ which according to Prodicus revealed the whole mystery.⁸ And indeed this sophist, had discourses of all prices from two oboli to fifty drachmas.⁹ Could any thing be more sordid?

The fable of Prodicus, wherein he supposes that virtue and pleasure, in the form of women, present themselves to Hercules, and endeavour, in emulation of each other, to allure him, has been justly extolled by many authors. Xenophon¹⁰ has explained it with great extent and beauty; yet he says, that it was much longer and more adorned in the piece of Prodicus upon Hercules. Lucian has imitated it ingeniously.

The Athenians put our sophist to death, as a corrupter of youth.¹¹ It is probable that he was accused of teaching his disciples irreligion.

5 Suidas.

6 About twenty-two shillings.

7 τὸ περὶ τῶν ὀνομάτων διδασκαλία.

8 In Cratyl. p. 384.

9 Id. in Axioch. p. 364.

10 L. 2. Memorab. pp. 737-740. Cic. off. l. i. n. 118.

11 Suid.

1 De Senect. n. 13.

2 Pausan. l. vi. p. 376.

3 Plut. in. Memon. p. 91.

4 L. v. c. 10.

These sophists did not support their reputation long. I have shown, in the life of Socrates, in what manner that great man, who believed it incumbent on him as a good citizen to undeceive the public in regard to them, succeeded in making them known for what they were, by taking off the mask from their faults. He interrogated them in public conversations, with an air of simplicity and almost ignorance, which concealed infinite art, as one who desired to be instructed and improved by their doctrine; and leading them on from proposition to proposition, of which they foresaw neither the conclusion nor consequences, he made them fall into absurdities, which showed in the most sensible and distinct manner the falsity of all their reasoning.

Two things contributed principally to their losing almost universally the opinion of the public. They set themselves up for perfect orators, who alone possessed the talent of speaking, and had carried eloquence to the utmost heights of which it was capable. They valued themselves upon speaking extemporaneously, and without the least preparation, upon any subject that could be proposed to them. They boasted their being capable of giving their auditors whatever impressions they pleased; of teaching how to make the worst of causes good,¹² and of making small things seem great, and great small, by dint of eloquence.¹³ This Plato tells of Gorgias and Tisias. They were equally ready to maintain either side of any subject whatsoever. They held truth as nothing in their discourses, and made their eloquence subservient not to demonstrate it, and make it lovely, but as a mere wit-skirmish, to give falsehood the colours of truth, and truth those of falsehood.

The great theatre in which they endeavoured to shine, was the Olympic games. There, as I have already said, in the presence of an infinite number of auditors assembled from all parts of Greece, they affectingly displayed whatever is most pompous in eloquence. With little or no regard for the solidity of things, they employed whatever is most glittering and most capable of dazzling the mind, proposing no other ends to themselves than to please the multitude, and obtain their suffrages. And this did not fail to ensue, their discourses being attended with universal applause. I need not observe how far such an affectation might carry them, and how capable it was of ruining the taste for good and solid eloquence. This Soc-

rates incessantly represented to the Athenians, as we find in several of Plato's dialogues, wherein he introduces him speaking upon this subject. For we must not imagine, when he attacks and condemns rhetoric, as he often does, that he means the true and sound rhetoric. He valued it as it deserves, but could not suffer the infamous abuse which the sophists made of it, nor applaud, with the ignorant multitude, discourses, that had neither solidity nor any real beauty in them. For, instead of dressing eloquence like a majestic queen, in the noble and splendid ornaments that become her dignity, but have nothing affected or unnatural in them; the sophists set her off in a foreign, soft, effeminate garb, like a harlot, who derives all her graces from paint, has only borrowed beauties, and at most knows only how to charm the ears with the sound of a sweet harmonious voice. This is the idea which Quintilian and St. Jerome, conformably to Socrates, give us of the eloquence of the sophists, and I imagine the reader will not be offended if I repeat their own terms in this place. "Quapropter eloquentiam, licet hanc (ut sentio enim dicam) libidinosam resupina voluptate auditoria probent, nullam esse existimabo, quæ ne minimum quidem in se indicium masculini et incorrupti, ne dicam gravis et sancti viri, ostendet!"—Quasi ad Athenæum et ad auditoria convenitur, ut plausus circumstantium suscitantur, ut oratoria Rhetoricæ artis fucata mendacio, quasi quedam meretricula procedat in publicum, non tam eruditura populos, quam favorem populi quesitura, et in modum psalterii et tibie dulce canentis sensus demulcent audientium."¹⁴ Persons of good sense, from the remonstrances of Socrates, soon perceived the falsity of this eloquence, and abated very much of the esteem they had conceived for the sophists.

A second reason entirely lost them the people's opinion: namely, the defects and vices remarkable in their conduct. They were proud, haughty, and arrogant, full of contempt for others and of esteem for themselves. They conceived themselves the only persons that understood, and were capable of teaching youth, the principles of rhetoric and philosophy in a proper manner. They promised parents, with an air of assurance or rather impudence, entirely to reform the corrupt manners of their children, and to give them, in a short space of time, all the knowledge that was necessary for filling the most important offices of the state.

They did not do all this for nothing, neither did they pique themselves upon generosity. Their prevailing vice was avarice, and an insa-

¹² Docere se prostebantur, arrogantibus sanè verbis, quemadmodum causa inferior (ite enim loquebantur) dicendo fieri superior posset. *In Brut.* n. 30.

¹³ Τὰ μικρὰ μεγάλα, καὶ τὰ μεγάλα μικρὰ φαίνεσθαι ποιεῖν διὰ λόγου λόγον. *In Phædro.* p. 267.

¹⁴ Quintil. l. v. c. 13.

¹⁵ S. Hieron. *Pref.* in l. iii. *Comment. ad Galat.*

tible desire of amassing riches. What was smartly said of Apollonius the stoic¹ philosopher, whom the emperor Antoninus caused to come from the east, to be preceptor to Marcus Aurelius whom he had adopted, may be applied to them.² He brought several other philosophers to Rome, all *Argonauts*, said a Cynic of those times, and well inclined to go in quest of the golden fleece.³ The sophists sold their instructions at a very great price, and as they had found means to bait the parents with magnificent promises, and the world was infatuated with the belief of their knowledge and merit, they extorted boldly from them, and made the most of the warm desire people expressed for the good education of their children. Protagoras⁴ took of his disciples for teaching them rhetoric an hundred minæ, or ten thousand drachmas, which is equal to five thousand livres.⁵ Gorgias, according to Diodorus Siculus and Suidas, had the same sum. Demosthenes paid as much for his instruction to the rhetorician Isæus.⁶ The perfect disinterestedness of Socrates, who had neither inheritance nor income, exposed still more by the contrast, the sordid avidity of the sophists, and was a continual censure of their conduct, much stronger than the sharpest reproaches he could have made them.

Notwithstanding these faults, which were personal to many of them, for some were not guilty of them, it must be confessed that the sophists rendered the public great services in the advancement of learning and the sciences, which were in a manner deposited with them for many ages.

Many cities of Greece and Asia, to which people went from different countries, to imbibe as at their source, all the sciences, have produced at all times sophists of great reputation. To abridge and conclude this article, I shall speak only of one of these sophists, the celebrated Libanius.

Libanius was of a good family of Antioch.⁷ He studied at Athens, Ant. J. C. 339, where he remained about four years. He was appointed

by the præconsul to teach rhetoric there at the age of twenty-five; but this nomination did not take place. He was a very zealous defender of paganism, which afterwards recommended him to the particular consideration of Julian the Apostate. He acquired great esteem by his wit and eloquence. He distinguished himself principally at Constantinople and Antioch. He was professor in the first of these cities for some years at different times, where he contracted a particular friendship with St. Basil, Ant. J. C. 395.⁸ That saint, before he went to Athens, came to Constantinople: and as that city abounded then with excellent philosophers and sophists, the vivacity and vast extent of his genius soon made him acquainted with whatever was best in their learning. Libanius,⁹ whose scholar he seems to have made himself, had an high regard for him young as he was, upon account of the gravity of his manners, worthy the wisdom of old age; which, says he, I admired the more, as he lived in a city where the allurements of pleasure were endless. When he was informed that this saint, notwithstanding his great reputation, had retired from the world, all pagan as he was, he could not but admire so generous an action, which equalled any thing ever done by his philosophers. In all St. Basil's letters to him, we see the singular esteem he had for his works, and his affection for his person. He directed all the youth of Cappadocia, who desired to improve themselves in eloquence, to him, as the most excellent master of rhetoric then in being, and they were received by him with particular distinction. Libanius says a thing very much for his honour in relation to one of these young men, whose circumstances were very narrow: that is, that he did not consider his pupils' riches but their good-will; that if he found a young man poor, who professed a great desire to learn, he preferred him, without hesitation, to the richest of his disciples; and that he was very well pleased, when those who had nothing to give, were earnest to receive his instruction.¹⁰ He adds, that it had not been his good fortune to meet with such masters: And indeed disinterestedness was not the virtue of the sophists. Those whose profession it is to teach, know that the soil most fruitful in merit is poverty.

He writes to Themistius, a celebrated sophist, whom his talents and wisdom had raised to the highest employments in the state, in a manner that shows Libanius had noble sentiments, and the love of mankind at heart. "I do not congratulate you," says he, "upon the government of the city being conferred on you; but I congratulate the city upon having made choice of

1 It was this Apollonius, who, when he arrived at Rome, refused to go to the palace, saying, it was the pupil's business to come to the master. Antoninus only laughed at this foolish pride and fantastic oddity of the stoic's humour, (who had been well satisfied to come from the East to Rome, and when at Rome would not go from his house to the palace,) and sent Mar. Aurelius to hear him at home. That prince continued to go thither to receive his lessons, even after he rose to the imperial dignity.

2 Lucian.

3 Demonax.

4 A Protagora decem milibus denariorum didicisse artem quam edidit, Evanthus dicitur. *Quinct.* l. iii. c. 1.

5 About £240 sterling.

6 *Diod.* l. xii. *Plut.* in Isæo. p. 106.

7 Lib. in vit. sua

8 St. Greg. Naz. orat. 20. p. 325.

9 *Epist. Liban.*

10 *Ἀρετὴ τῆς κατὰ δυνάμειν δαπάνης, τοῦ βουλευθέντος λαοῦ.*

you for so important a trust. You want no new dignities, but the city is in great want of such a governor as you."

It were to be wished, that Libanius had been as irreproachable in regard to his manners, as he was estimable for his wit and eloquence. He is reproached with having been too full of esteem for himself, and too great an admirer of his own works. This ought not to astonish us much. We might almost say, that vanity was the virtue of paganism.

Libanius passed the last thirty-five years of his life at Antioch, from the year 354, to about 390, and professed rhetoric there with great success. Christianity supplied him also with another illustrious disciple in the person of St. Chrysostom. His mother, who spared nothing for his education, sent him to Libanius's school, the most excellent and the most famous sophist, who then taught at Antioch, in order to his forming himself under so great a master. His works, from which he had been denominated *Golden Mouth*, show the progress he made there. At first he frequented the bar, pled some causes, and declaimed in public.¹¹ He sent one of

these discourses in praise of the emperors to Libanius, who, in thanking him for it, tells him, that he and several other persons of learning to whom he had showed it, admired it. An author¹² assures us, that some of his friends asking this sophist when he was near death, whom he should approve of to succeed him as professor, he replied, that he should have chosen our saint, if the christians had not engrossed him: but his pupil had very different views.

If we may judge of the master by his scholars, and of his merit by their reputation, the two disciples of Libanius, whom I have now cited, might alone do him great honour. And indeed he passed for a great orator in the opinion of all the world. Eunapius¹³ says, that all his terms are curious and elegant, that whatever he writes has a peculiar sweetness and insinuating grace, with a sprightliness and gaiety, that serves him instead of the salt of the ancients.

Libanius has left us a variety of writings, consisting of panegyrics, declamations, and letters: of all which, his letters have ever been the most esteemed.

¹¹ Isid. Pelus. l. ii. Ep. 42.

¹² Sozom. l. viii. c. 2.

¹³ Eunap. c. 14.

OF THE SUPERIOR SCIENCES.

We are now come to that part of literature, which is the greatest and most exalted in the order of natural knowledge, namely, Philosophy, and the Mathematics that are a branch of it. The latter have under them a great number of arts and sciences, which either depend upon or relate to them. The study of these requires, for succeeding in it, force and extent of mind, which natural qualities it highly improves. It is evident, that subjects so various, extensive, and important, can only be treated of very superficially in this place: neither do I pretend to take them all in, or to give an exact detail of them here. I shall confine myself to the most select, and shall treat of what seems most proper to gratify, or rather to excite, the curiosity of readers little versed in such matters, and to give them some idea of the history of the great men, who have distinguished themselves in these sciences, and of the improvements they have acquired in coming down from the ancients to the moderns.

All the sciences of which I am to speak here, may be divided into two parts; Philosophy and the Mathematics. Philosophy will be the subject of this book; and Mathematics of the following, which will be the last.

OF PHILOSOPHY.¹

Philosophy is the study of nature and morality founded on the evidence of reason. This science

was at first called *sophia*, Wisdom; and the professors of it *sophi*, Sages or Wisemen. These names seemed too arrogant to Pythagoras, for which reason he substituted more modest ones to them, calling this science *Philosophy*, that is to say, love of wisdom; and those who taught or applied themselves to it *Philosophers*, lovers of wisdom.

Almost in all times and in all civilized nations, there have been studious persons of exalted genius, who cultivated this science with great application: the priests in Egypt, the Magi in Persia, the Chaldeans in Babylon, the Brahmins or Gymnosophists in India, and the Druids among the Gauls. Though philosophy owes its origin to several of those I have now mentioned, I shall consider it here only as it appeared in Greece, which gave it new lustre, and became in a manner its school in general. Not only some individuals, dispersed here and there in different regions, from time to time make happy efforts, and by their writings and reputation give a shining, but short and transient light; but Greece, by a singular privilege, brought up and formed in her bosom, during a long and uninterrupted series of ages, a multitude, or, to speak more properly, a nation of philosophers, solely employed in inquiring after truth; many of whom with that view renounced their fortunes, quitted their countries, undertook long and laborious voyages, and passed their whole lives to extreme old age in study.

¹ In this division of his work, Rollin will be found to be tolerably full and particular regarding the various philosophers and philosophic sects of Greece. But as he has not embraced in his treatise a view of the origin and state of philosophy in the more ancient nations—as the Egyptians, the Hebrews, the Chaldeans, the Persians, &c.—and has even neglected to trace the birth of Grecian philosophy in the ages of the earliest poets, before it came to be a regular science, divided into sects or schools, we shall here endeavour to supply, in some measure, the deficiency,—not with the aim of giving a regular treatise on ancient philosophy, which, indeed, considering the extent of the subject, would be a preposterous attempt in a limited note like the present, but with the hope of rendering our author's treatise

less abrupt in its commencement, and more complete in its nature.

Philosophy, in a general and loose acceptance of the word, may be said to be coeval with any considerable exertions of the faculties of reason and judgment among mankind. In this conception of it, the most superficial observations upon natural objects, or the simplest reflections upon actions and events, may be regarded as the first buds of science in the human mind. But if by that term we understand such a measure of rational study and investigation, as may be productive of scientific knowledge, either in things natural, moral, or divine, the birth of philosophy cannot be reckoned to coincide with the rude ages of the world, or the earliest periods of political society. To mature human reason itself, a

Can we believe that this tenacious union of learned and studious persons, of so long duration in one and the same country, was the mere effect of chance, and not of a peculiar Provi-

dence, which excited so numerous a succession of philosophers to support and perpetuate ancient tradition concerning certain essential and capital truths? How useful were their precepts upon

certain extent of experiences, and a reiteration of them, are necessary; and this foundation of real knowledge cannot well be laid but by the settled intercourse of men, and their holding conversations together, for confirming the truth of their experiences, and the enlargement of them. Philosophy, therefore, taken in a proper sense, may be concluded to have had its origin in the more social and civilized conditions of mankind; and, in judging of the pretensions of nations to acquaintance with the common arts of life, or any of the speculative sciences, in priority of time to others, it may be presumed, in general, that the claim of those amongst them ought to be preferred, whose political establishments had precedence, and whose governments were so fixed as to afford room and encouragement to inventions and discoveries, either useful to the community or entertaining to the minds of men, when they enjoyed from it protection and tranquillity.

Egypt has claimed the honour of being the first seat of learning, and the fountain whence the streams of philosophy flowed to Chaldaea, and other Asiatic nations, till it reached the remotest borders of India. Though there seems to be no sufficient ground for admitting these high pretensions, Egypt is unquestionably to be ranked among the most ancient civilized countries, and was very early famous for wisdom. Many eminent philosophers among the Greeks, such as Orpheus, Thales, Pythagoras, Democritus, and Plato, visited Egypt in search of knowledge; and the illustrious legislator of the Hebrews was "learned in all the wisdom of the Egyptians." Nevertheless, as has been remarked in other places of this work, the history of the Egyptians, after all the pains that have been taken to elucidate the subject, still remains involved in obscurity: and it will not be thought surprising that it is only in our power to lay before our readers the following particulars, as a probable state of facts respecting the ancient Egyptian philosophy.

Thout or Thoth, called by the Greeks, Hermes, and by the Romans, Mercury, is generally considered as the first author of the Egyptian learning—as the inventor of letters, the institutor of religious rites, and the teacher of astronomy, music, and other arts. He was probably some man of superior genius, who, before the age of Moses, had invented some useful arts, and taught the first rudiments of science; and who caused his instructions to be engraved in emblematical figures upon tables or columns of stone. One of the principal uses, to which these symbolical inscriptions were applied, doubtless was, to teach the doctrines of religion, and maxims of political and moral wisdom. Some writers have, fancifully enough, conjectured this Thoth, or Mercury, to have been the same with Adam, or Enoch, or Joseph. Others have maintained that he was the Jewish legislator; but the circumstances of resemblance, between Thoth and Moses, were such as might easily be supposed to have occurred between any other eminent founders of states.

Besides this Hermes, there was another of a later period, equally celebrated. He was called likewise *Triemegistus*. To him are ascribed the restoration of the wisdom taught by the first Mercury, and the revival of geometry, arithmetic, and the arts, among the Egyptians. From the tables of his prototype, he is said to have written, as commentaries and explanations, an incredible

number of books. It has been asserted, that he was the author of more than twenty thousand volumes which treated of universal principles, of the nature and orders of celestial beings, of astrology, medicine, and other topics. But many of the subjects, on which these writings are said to have treated, were unknown in the early period of the Egyptian philosophy. There can be little doubt, therefore, that they were the forgeries of a later age, when it became one of the common artifices of imposture to give the sanction of antiquity to fiction.

From these first supposed authors of Egyptian wisdom, all learning was transmitted to posterity by means of the priesthood. The Egyptian priests had the reputation of extraordinary sanctity, and were even supposed to participate of divinity. Hence they obtained great sway over the people, and possessed no small share of influence in civil affairs. By them the mysteries of religion and philosophy were written in hieroglyphical characters. Many attempts have been made to explain the hieroglyphic mode of writing; but it is only of late that any approaches to success in these endeavours have been obtained by Dr. Young, to the result of whose labours the curious look forward with eager anticipation. At the same time, it is evident, that we can have little hope, at this distant period, of being able completely to draw aside the veil which has so long concealed the Egyptian mysteries.

Of the proficiency of the Egyptians in several of the arts and sciences, information will be found under their respective heads throughout this volume. In the fictitious sciences of astrology and magic there can be no doubt but that they were adepts. Their priests were not negligent in cultivating arts which would give them such an irresistible sway over an ignorant and superstitious populace. One of the most ancient sects of the magi, as the Mosaic history informs us, was among the Egyptians. These magi made use of small images, of various forms, with which they pretended to perform many wonders, and particularly to cure diseases.

The Egyptian theology or philosophy was of two kinds—the one exoteric, addressed to the vulgar, the other esoteric, confined to a select number of the priests, and to those who possessed, or were to possess, the regal power. The exoteric religion of the Egyptians is known to have existed in the grossest and most irrational superstitions. Besides gods, heroes, and eminent men, the populace worshipped various kinds of animals and plants. In different districts of Egypt, however, different tenets prevailed. Of this, Juvenal furnishes an example in his account of a quarrel between the inhabitants of Tentyra and Ombri, two neighbouring districts in Egypt, concerning the crocodile; the Tentyrites being accustomed to worship this formidable animal, and the Ombrians to kill it wherever they found it. Concerning the esoteric or philosophical doctrine of the Egyptians, it seems evident, in the first place, that they conceived matter to be the first principle of things, and that before the regular forms of nature arose, an eternal chaos had existed, which contained, in a state of darkness and confusion, all the materials of future beings. This Chaos, which was also called Night, was, in the most ancient times, worshipped as one of the superior divinities. Aristotle speaks of Chaos and Night as one and the same, and as the First Principle, from which, in the ancient cosmogonies, all things are derived. It is

morality, upon the virtues and duties in preventing the growth or rather inundation of depravity and vice? For instance, what hideous disorder had taken place, if the Epicurean had

been the sole prevailing sect! How much did their disputes conduce to preserve the important doctrines of the difference between matter and mind, the immortality of the soul, and the exist-

probable, that the Egyptians worshipped the material principle, Chaos, or Night, under the name of Athor, a word which in the Coptic language, signifies *night*. This divinity, the Grecian mythologists, after their usual manner, confounded with Venus.

Besides the material principle, the Egyptians admitted an active principle, or intelligent power, eternally united with the chaotic mass, by whose energy the elements were separated, and bodies were formed, and who continually presides over the universe, and is the efficient cause of all effects. For this, we have not only the authority of Plutarch, who may be suspected of having exhibited the Egyptian philosophy in a Grecian dress, but the united testimony of many writers, who give such accounts of the Egyptian gods *Phthas* or *Vulcan*, and *Cneph* or *Agathodæmon*, as render it probable that these were only different names expressing different attributes of the Supreme Divinity. The Egyptians, says Eusebius, call the maker of the universe by the name of *Cneph* and relate, that he sent forth an egg from his mouth, which, in their symbolical language, denotes that he produced the universe. Diodorus Siculus speaks of the Egyptian *Vulcan* as the first king among the gods, and *Manetho* ascribes to him unlimited duration and perpetual splendour. The name itself, *Phthas*, in the Coptic language, denotes one by whom events are ordained. When the Egyptians meant to represent the Ruler of the world as good, they called him *Cneph*, a word which denotes a good genius, and represented him under the symbol of a serpent. When they worshipped the Divinity under the notion of an offended sovereign, they called him *Tithrambo*, that is, according to the Greeks, *Hecate*: and the Evil Principle, from which they conceived themselves liable to misfortune, they deprecated as an object of terror, under the name of *Typhon*. Upon a temple dedicated to *Neitha*, at *Sais*, the chief town in Lower Egypt, was this inscription: "I am whatever is, or has been, or will be, and no mortal has hitherto drawn aside my veil: my offspring is the sun." Both Plutarch and Proclus mention this inscription, though with some difference of language; and it is so consonant to the mythological spirit of the Egyptians, that, notwithstanding the silence of more ancient writers, who treat of their theology, its authenticity may be easily admitted.

The doctrine of an ethereal intelligence pervading and animating the material world, appears among the Egyptians, to have been from the earliest time accompanied with a belief in inferior divinities. Conceiving emanations from the Divinity to be resident in various parts of nature, when they saw life, motion, and enjoyment communicated to the inhabitants of the earth from the sun, and, as they supposed, from other heavenly bodies, they ascribed these effects to the influence of certain divinities, derived from the first Deity, which they supposed to inhabit these bodies. Hence arose their worship of the sun, under the names of *Osiris*, *Ammon*, and *Horus*; of the moon, under those of *Isis*, *Bubastis*, and *Buto*; of the *Cabiri*, or planets; of *Sothis*, or the dog-star; and of other celestial divinities. From the same source it may be easily conceived, that, among the Egyptians as well as in other nations, would arise the worship of deified men. When they saw their illustrious heroes, or legislators, protecting their country by their prowess, or improving human life by useful inventions and institutions, they concluded that a large portion of

that divinity, which animates all things, resided in them, and supposed, that, after their death, the good demon that animated them, passed into the society of the divinities. In this manner it may be conceived, that the worship of heroes would spring up together with that of the heavenly bodies. But whether the former did in fact prevail among the Egyptians, is a question which has been much disputed, and which, after all that has been advanced upon it, still remains undecided.

The opinion of the Egyptians concerning the human soul is very differently represented by different writers. It is indeed universally agreed, that they believed it to be immortal. Herodotus asserts, though perhaps without sufficient ground, that they were the first people who taught this doctrine; and Diodorus Siculus relates, that the Egyptians, instead of lamenting the death of good men, rejoiced in their felicity, conceiving that, in the invisible world, they would live for ever among the pious. To the same purport is the account which he gives of the custom of bringing the characters of the deceased under a public trial, and offering up prayers to the gods on behalf of those who were adjudged to have lived virtuously, that they might be admitted into the society of good men. But it has been a subject of debate into what place, according to the Egyptian doctrine, the souls of men passed after death. Plutarch speaks of the *Amenthes* of the Egyptians, corresponding to the *Hades* of the Greeks, a subterraneous region to which the souls of dead men were conveyed. With this agrees the account given by Diodorus Siculus of the funeral customs of the Egyptians. It is also confirmed by a fact, related by Porphyry, upon the authority of Euphrantus, that the Egyptians, at their funerals, offered up this prayer in the name of the deceased: "Thou sun, who rulest all things, and ye other powers, who give life to man, receive me, and grant me as abode among the immortal gods." Herodotus, on the contrary, gives it as the opinion of the Egyptians, that, when the body decays, the soul passes into some other animal, which is then born: and that after it has made the circuit of beasts, birds, and fishes, through a period of three thousand years, it again becomes an inhabitant of the human body. Diogenes Laertius, after Herodotus, relates that, according to the tenets of the Egyptians, the soul after death continues to live, and passes into other bodies. These different notions, concerning the state of the soul after death, were probably held by different colleges of priests, some of whom were advocates for the doctrine of transmigration, while others held, that the souls of good men, after wandering for a time among the stars, were permitted to return to the society of the earth, or to enjoy the company of the gods.

As the Egyptians held, that the world was produced from chaos by the energy of an intelligent principle, so they conceived that there is in nature a continual tendency towards dissolution. In Plato's *Timæus*, an Egyptian priest is introduced, describing the deterioration of the world, and asserting that it will be effected by means of water and fire. They conceived that the universe undergoes a periodical conflagration, after which all things are restored to their original form, to pass again through a similar succession of changes.

Diodorus Siculus relates many particulars concerning the laws, customs, and manners of the Egyptians, whence it appears, that superstition mingled with, and

ence of a supreme Being! It is not to be doubted, but God has revealed admirable principles to them upon all these points, preferably to the many other nations, whom barbarity

continued in profound ignorance.¹ It is indeed true, that many of these philosophers advanced strange absurdities. And even all of them, according to St. Paul, "held the truth in un-

corrupted their notions of morals. It is in vain to look for accurate principles of ethics among an ignorant and superstitious people. And that the ancient Egyptians merited this character is evident from these circumstances, that they suffered themselves to be deceived by impostors, particularly priests and astrologers, concerning whom Sextus Empiricus justly remarks, that they have done much mischief in the world, by enslaving men to superstition, and suppressing the dictates of right reason."

The Jewish economy was the means of introducing a code of morality, which, while it furnished a striking contrast to the irregularities of other nations, prepared the way for the development of a more perfect and comprehensive system, in the Christian dispensation. The ten commandments comprehend an important summary of moral duty, such as was highly calculated, in proportion to its diffusion, to check the progress of wickedness among mankind. The first table requires the worship of the one only living and true God, as supreme over all the creation and the source of every blessing, and interdicts every species of idolatrous adoration as inconsistent with his unity and his perfections. It inculcates inward as well as outward worship, the regard of a Sabbath, and the obligation of oaths. The second table specifies and enjoins our social duties, including the intercourse both of domestic and public life—our circumstances as men and as citizens. The Jewish economy, however, must not be confounded with philosophy in the strict acceptation of the term. In the first ages of history, the Hebrew patriarchs were shepherds, who, by their domestic virtues, obtained great authority over the people among whom they lived, and seemed to have had no other object of ambition, than that of providing for the safety and prosperity of their families. Joseph, the son of Jacob, and after him Moses, David, Solomon, Ezra, and other eminent men, were occupied in affairs of legislation and government, and, by the wisdom with which they conducted them, acquired high renown. Others, who were distinguished by the name of prophets, were employed in declaring to the people the will of God, in managing the affairs of religion, and in training up disciples for these sacred services. Among the Hebrews, we are therefore to look for prudent statesmen, upright judges, and priests learned in the law, but not for philosophers in the limited sense in which we understand the term. Much pains has indeed been taken both by Jewish and Christian writers, to affix this character to several illustrious names in the ancient Hebrew nation, particularly Moses, Solomon, and Daniel; but it will not be difficult to prove, that this has been attempted without sufficient reason.

It has been asserted, for example, that Moses reached the summit of human learning, and he is represented as having been a perfect master of astronomy, geometry, music, medicine, occult philosophy, and, in short, of the whole circle of the arts and sciences, which were at that time known. The principal arguments by which this has been supported are, that St. Stephen speaks of him as having been "learned in all the wisdom of the Egyptians;" that a general tradition to this purpose has prevailed among the Jews from the most ancient times;

1 "Because that which may be known of God, is manifest in them, for God hath showed it unto them." *Rom. i. 19.*

that in reducing Aaron's golden calf to powder, he showed great chemical skill; that his account of the creation discovers an extensive acquaintance with nature; and that his laws abound with moral wisdom. To this it has been added, that Moses, during the forty days he was upon the mount with God, besides the written code, received also an oral or traditional law, since called the *Cabbala*, and that he taught this concealed doctrine to persons selected out of all the tribes of Israel, by whom it was transmitted to posterity. Some have even asserted, that he wrote books, now lost, from which Pythagoras and Plato drew a great part of their doctrine. In answer to all this, it may be stated, that little stress is to be laid upon the account given of Moses by St. Stephen, since the learning which he ascribes to him was only that of the Egyptians at the time when he flourished, which, as we have seen, was confined within very narrow limits. The skill which Moses discovered in the affair of Aaron's golden calf was probably not chemical, as many have supposed, but merely mechanical; for nothing further can with certainty be inferred from the scripture account of this transaction, than that Moses ordered the calf, which had been made an object of idolatry, to be cut into small pieces, and thrown into a river. In delivering laws and institutions to the Jews, Moses is to be considered, not as a philosopher, but in the higher character of minister and representative of Jehovah, by whose immediate authority their nation was governed. As to the traditional law which the Jewish writers suppose to have been the ground of their *Cabbala*, if it were not a mere invention of later times, it must have been given by divine revelation, and can furnish no argument in defence of the philosophy of Moses. Much less can any argument for this purpose be derived from writings which are confessedly lost, and which have not been proved to have ever existed.

With regard to Solomon, again, many authors, not satisfied with having the first place assigned him among the wise men of the East, have not scrupled to say, that Aristotle and Theophrastus pillaged their natural history, Hippocrates his medicine, the Stoics their ethics, and Pythagoras and Plato the symbolical philosophy, from his writings. Others have supposed him to have known the use of the mariner's compass, and to have been acquainted with the doctrine of the circulation of the blood, and other anatomical discoveries. Opinions and assertions of this kind might have been endured from the Jewish writers, whose vanity has always been equal to their ignorance; but that learned men of later times should adopt and promulgate such absurdities, is truly wonderful. It is sufficient to remark, that had Solomon been thus astonishingly enlightened, it must have been by divine revelation, and not by philosophy; and that the wisdom which is attributed to him in scripture was not speculative science, but that practical wisdom which was necessary to qualify him for the offices of government.

We are informed, that there were among the Hebrews, schools, in which the prophets presided, and gave instructions to their disciples; but we are not to imagine that these schools were colleges of philosophers, or, as

* See Dr. Enfield's valuable History of Philosophy, a work to which we have been much indebted in drawing out the present Note.

righteousness—because that when they knew God, they glorified him not as God, neither were thankful."¹ None of their schools had ever the courage to maintain or prove the unity

of God, though all the great philosophers were fully convinced of that truth. God has been pleased by their example to teach us, what man abandoned to himself, and his mere capacity is.

1 Rom. i. 18—21.

some have done, to apply our modern idea of an academic life to these institutions. As the prophets were employed in delivering the will of God to the people, and in inculcating upon them the principles, and inspiring them with the sentiments of religion, by means of sacred hymns accompanied with music, so it was, doubtless, the business of the schools to train up young men, who were devoted to the priesthood, for the same offices. It is well known, that the Hebrews never excelled in mathematical or philosophical learning, or liberal arts, nor were ever distinguished by any ingenious discoveries.

Next to the Hebrews, the most ancient people among the eastern nations, were the Chaldeans. It appears from several ancient authorities, that the Chaldeans believed in God, the Lord and Parent of all, by whose providence the world is governed. Besides the Supreme Being, they supposed spiritual beings to exist of several orders, gods, demons, heroes. These they probably divided into subordinate classes, as their practice of theurgy or magic required. The ancient Eastern nations in general, and among the rest the Chaldeans, admitted the existence of certain evil spirits, clothed in a vehicle of grosser matter; and in subduing or counteracting these, they placed a great part of the efficacy of their religious incantations. These doctrines were the mysteries of the Chaldean religion, communicated, as was usual among the ancients, only to the initiated. Their popular religion consisted in the worship of the sun, moon, planets, and stars, as divinities, after the general practice of the east.

The Chaldean philosophers were the priests of the Babylonian nation, who instructed the people in the principles of religion, interpreted its laws, and conducted its ceremonies. The principal instrument which these impostors employed in support of superstition was astrology. A distinct class was appointed among them, and supported at the public expense, for making regular observations upon the heavenly bodies; whence the appellation of Chaldean afterwards became synonymous with that of astronomer. But all their observations were applied to the single purpose of establishing the credit of judicial astrology; and they employed their pretended skill in this art, in calculating nativities, foretelling the weather, predicting good and bad fortune, &c. Teaching the vulgar that all human affairs are influenced by the stars, and professing to be acquainted with the nature and laws of this influence, and consequently to possess a power of prying into futurity, they encouraged much idle superstition, and many fraudulent practices, from which it is easy to perceive what title they had to the appellation of wise men. No one, who has a just idea of the nature and use of philosophy, can hesitate in dismissing them from the rank of philosophers to their proper station among impostors. Whatever share of knowledge they possessed, it is evident that they applied it to the purposes of superstition. Little regard is, therefore, due to the encomiums which some writers have passed upon this race of sages; and still less to the general admiration which, at a very early period, they obtained in the east, for this was the natural effect of their successful practice of the arts of imposture among an ignorant and credulous people.

Zoroaster is generally acknowledged to have been the

founder of the Chaldean philosophy. Of this sage nothing absolutely is known, in evidence of which we may merely mention a few of the conflicting speculations • that have been advanced concerning him, premising, that we feel too much alive to the folly, and too deeply disgusted with the jargon, of those who devote themselves to such researches, to dwell for a single instant upon the subject. Some have maintained that there was but one Zoroaster, and that he was a Persian; others have said, that there were six eminent founders of philosophy of this name! Some place his date at six thousand years before the death of Plato; some at thirteen hundred years after the flood! Some say that he lived five thousand years before the Trojan war; some, five hundred! Some make him the disciple of Elijah or Elisha; others of Osair, Ezra, or Eedras! Some consider him the same as Ham, the son of Noah; some as Moses; some as Osiris; some as Mithras; some as the usurper Zohak; some as Smerdus Magus; some as Abraham!

Of the philosophy of the Persians, which comes next under consideration, it is difficult to form a satisfactory judgment; for the sources of information on this subject are all derived from the Greeks and Arabians, upon whose impartiality or fidelity little dependance can be placed. The religion which the Persian magi taught consisted in the worship of the sun or fire; a practice which prevailed among the Assyrians, Chaldeans, and many other eastern nations. The name under which the Persians worshipped the sun, or rather the invisible deity whom they supposed to be, in a peculiar manner, resident in this luminary, was *Mithras*. Both Herodotus and Strabo say that the Persians sacrificed horses to the sun; a circumstance to which Ovid alludes in these lines—

Placat equo Persis radiis Hyperiona cinctum
Ne detur celeri victima tarda Deo.

Fastor. l. i. v. 383.

The horse, renown'd for speed, the Persians slay,
A welcome victim to the god of day.

It may be conjectured, that in a more remote period, some eminent hero or public benefactor, whose name was Mithras, had, after his death, been deified; for in certain ancient Persian monuments, Mithras is represented as a mighty hunter, armed with a sword, having a *tiara* on his head, and riding a bull. Perhaps the Persians might conceive the soul of this hero to be resident in the sun, and might afterwards transfer their worship to the sun itself, under the name of Mithras. Besides Mithras, the Persians worshipped under opposite characters, *Oromasdes* and *Arimanius*; the former as the author of all good, the latter as the author of all evil. Perhaps these divinities were originally, like Mithras, merely human beings; the one a good prince, who had distinguished himself by rendering important services, military or civil, to his countrymen; the other a tyrant, who had been the cause of grievous public calamities.

The Persian magi were divided into three classes: the first consisted of the inferior priests, who conducted the ordinary ceremonies of religion; the second presided over

¹ • Hyde de Rel. Pers. c. xxiv.; Prideaux's Connection, vol. i.; Fabric. Biblioth. Græc. vol. i.; Huet. Dem. Evang. pr. iv. c. 3.; Kircher. Œdip. Egypt. p. 216.; Laertius, lib. i. § 2.; Suidas in voc. Zoroast.; Plin. Hist. Nat. l. vii. c. 16. xl. 42. xxx. l.; Justin, l. i. c. 2.

During four hundred years and upwards all these great geniuses, so subtle, penetrating, and profound, were incessantly disputing, examining, and dogmatizing, without being able to agree

upon, or conclude any thing. They were not destined by God to be the light of the world: "Those did not the Lord choose, neither gave he the way of knowledge unto them."¹

the sacred fire; the third was the *Archimagus*, or high priest, who possessed supreme authority over the whole order. They had three kinds of temples: first, common oratories, in which the people performed their devotions, and where the sacred fire was kept only in lamps; next, public temples, with altars, on which the fire was kept continually burning, where the higher order of the magi directed the public devotions, and the people assembled, to perform magical incantations, hear interpretations of dreams, and practise other superstitions; and, lastly, the grand seat of the Archimagus, which was visited by the people at certain seasons with peculiar solemnity, and to which it was deemed an indispensable duty for every one to repair, at least once in his life. The kings of Persia were not allowed to take possession of their government till they had been instructed in the mysteries of religion, and enrolled among the Magi. No images or statues were permitted in the Persian worship. Hence, when Xerxes found idols in the Grecian temples, he, by the advice of the magi, set them on fire, saying, that the gods, to whom all things are open, are not to be confined within the walls of a temple. The account which Dio-genes Laertius gives of the Persian magi is this: "They are employed in worshipping the gods by prayers and sacrifices, as if their worship alone would be accepted; they teach their doctrine concerning the nature and origin of the gods, whom they think to be fire, earth, and water; they reject the use of pictures and images, and reprobate the opinion that the gods are male and female; they discourse to the people concerning justice; they think it impious to consume dead bodies with fire; they allow of marriage between mother and son; they practise divination and prophecy, pretending that the gods appear to them; they forbid the use of ornaments in dress; they clothe themselves in a white robe; they make use of the ground as their bed, of herbs, cheese, and bread, for food, and of a reed for their staff." Strabo relates, that there were in Cappadocia a great number of magi, who were called *Pyrethi*, or fire-worshippers, and many temples of the Persian gods, in the midst of which were altars, attended by priests, who daily renewed the sacred fire, accompanying the ceremony with music.

The Persians, like the Chaldeans, have a Zoroaster, or Zardusht, to whom they attribute the revival and improvement of the religion of the ancient magi. Much is said by the Arabian writers concerning the learning which this Zoroaster acquired from the Indian Brahmins, concerning the influence which he obtained with Darius, and the success with which he propagated his system; and, lastly, concerning his assassination by Artaspas, king of the Eastern Scythia, at the siege of Bactria. But the silence of the Greeks who were at this time well acquainted with the affairs of Persia, and after Alexander's conquests must have become possessed of many Persian records, is a circumstance which casts a cloud of suspicion over these relations. This much, however, may be admitted as probable—that there was in Persia, in the time of Darius Hystaspes, a reformer, who, assuming the ancient name of Zoroaster, brought back the Persians from the worship of the stars to their ancient worship of fire, with some innovations both in doctrine and ceremonies: perhaps, too, it may be added, that he was acquainted with astronomy, with the medical art, and with other branches of learning, as far as they were at that time advanced in the east. Both the reality and

2 Baruch iii. 27.

the success of this attempt are confirmed by the testimony of Lucian, who relates, that in his time the ancient religion of the magi flourished among the Persians, the Parthians, the Bactrians, the Chorasmians, the Sacans, the Medes, and other barbarous nations. And the reports of modern travellers give farther credit to this relation; for we learn from them that there is still in the province of Caramania, a sect who adhere to the doctrines of Zoroaster, and worship fire according to the institutions of the ancient magi.

Many writings are ascribed to the Persian Zoroaster. One of these, called the *Zend*, is said to be still remaining among his followers, and is esteemed of sacred authority. Fragments of a work entitled *The Oracles of Zoroaster* are also still extant. Many other works in astrology, physics, theology, &c. have been attributed to him; but they are all lost; and it is probable that most of them were forged to serve the purposes of imposture.

India, at a very early period, obtained a high degree of reputation for its wise men. It was visited, for the purpose of acquiring knowledge, by Pythagoras, Anaxarchus, Pyrrho, and others, who afterwards became eminent philosophers in Greece. In the most ancient times, we find among the Indians a race of wisemen, who are sometimes called Gymnosophists, from their custom of appearing with the greater part of the body naked, and sometimes Brahmins; but this latter appellation is properly the name of only one class of these philosophers, who were divided into several sects. The Brahmins were all of one tribe. From the time of their birth they were put under guardians, and as they grew up had a succession of instructors. They were in a state of pupillage till thirty-six years of age; after which they were allowed to live more at large, to wear fine linen and gold rings, to live upon the flesh of animals not employed in labour, and to marry as many wives as they pleased. Others submitted, through their whole lives, to a stricter discipline, and passed their days upon the banks of the Ganges, with no other food than fruits, herbs, and milk. The Samanians were a society, formed of those who voluntarily devoted themselves to the study of divine wisdom. They gave up all private property, and committed their children to the care of the state, and their wives to the protection of their relations. They were supported at the public expense, and spent their time in contemplation, in conversation on divine subjects, or in acts of religion. A wonderful circumstance is related concerning these philosophers, that, frequently, without any apparent reason from ill-health or misfortunes, they formed a resolution to quit the world, and, when they had communicated their intention to their friends, immediately, without any expressions of regret on the one side, or of apprehension on the other, threw themselves into a fire which they had themselves prepared for the occasion. There was another sect, called the Hylobians, who lived entirely in forests, upon leaves and wild fruits, wore no other clothing than the bark of trees, and practised the severest abstinence of every kind.

It is easy to perceive, from this account of the Indian Gymnosophists, that they were more distinguished by severity of manners than by the cultivation of science, and that they more resembled modern monks than philosophers. The rigours which have been, and are to this

Philosophy, among the Greeks, was divided into two great sects: the one called the *Ionic*, founded by Thales of Ionia; the other the *Italic*, because it was established by Pythagoras in that

part of Italy, called *Græcia Magna*. Both the one and the other were divided into many other branches, as we shall soon see.

This in general is the subject of my intended

day, practised among the Indians, are such as could not be credited but upon the best authority. Pliny relates, that some have stood with their eyes steadfastly fixed upon the sun from morning to night; and that others have remained in one painful posture upon the burning sands for whole days: stories which are confirmed by the reports of modern travellers concerning the voluntary severities, and even tortures, which are commonly practised upon themselves by the Indian Brahmins. Such examples of abstinence and hardy endurance could not fail to make a strong impression on the minds of the multitude, and to give the Gymnosophists great influence, in an age of ignorance and superstition. In order to preserve and increase their power, they made use of two expedients. The first was the keeping among themselves the whole business of foretelling future events. They, doubtless, made use of this precaution, in order to render themselves the more necessary to the ruling powers, who would easily perceive the value of such an instrument of superstition. The other expedient, by means of which they maintained their authority, was the appropriating to themselves the regulation of religious concerns. To establish their reputation for sanctity, they spent the greater part both of the day and night in performing acts of worship. By these means, they made themselves of consequence to the ruling powers, and became objects of veneration to the people; so that they could easily gain access wherever they pleased, and obtain whatever they wished. Many tales are related concerning these Gymnosophists, which are too strongly marked with the characters of fiction to merit repetition.

The sum of the doctrine of the Gymnosophists is said to have been as follows: "God is light, not such as is seen, like the sun or fire, but intelligence and reason; that principle, through whose agency the mysteries of knowledge are understood by the wise. He never produced evil, but light and life, and souls, of which he is the sole Lord. He is the former and governor of the universe: he pervades it, and is invested with it, as with a garment: he is immortal, and sees all things; the stars, the moon, and the sun, are his eyes. He is beneficent, and preserves, directs, and provides for all. The human mind is of celestial origin, and has a near relation to God. When it departs from the body, it returns to its Parent, who expects to receive back the soul which he has sent forth. Besides the Supreme Divinity, inferior deities, proceeding from him, are to be worshipped, but not with the sacrifice of harmless animals, nor in temples, nor upon altars adorned with gold and gems, but with eyes lifted up to heaven, and with minds free from criminal passions."

Among the wise men of India, whose names have been preserved to the present time, or who are mentioned with respect by the Greek writers, the chief are, Buddas, Dandamis, and Calanus. Of the first little is known, more than that he was a religious impostor, who, by pretending to a divine original and miraculous birth, obtained credit and authority whilst he lived, and after his death was honoured with divine worship. St. Jerome relates, * that he boasted of having been brought forth from the side of a virgin. This impostor is probably the same who is at present honoured in Siam, China, and Japan, under the names of Somanacodom, Xeko,

and Fohi. Dandamis is celebrated for the boldness with which he censured the intemperance and licentiousness of Alexander and his army, in a conference which he held with Onesicritus. Of Calanus it is related, that when he found the infirmities of age coming upon him, he devoted himself to voluntary death, and ascending the funeral pile, said, "Happy hour of departure from life, in which, as it happened to Hercules, after the mortal body is burned, the soul shall go forth into light!"

Concerning the philosophy of the Arabians and Phenicians, little can be said. The sum of our knowledge of the ancient Arabians, as far as respects the present subject, is, that they were not unacquainted with astronomy, and that they were famous for their ingenuity in solving enigmatical questions, and for their skill in the arts of divination. Like the neighbouring Chaldeans and Persians, they seem to have had their wise men, by whom their religious ceremonies and superstitious arts were practised. Pliny mentions the Arabian magic, and speaks of Hippocus, an Arabian, as belonging to this order.

The commercial celebrity of the Phenicians has induced many to allow them great credit for wisdom. There can, indeed, be little reason to doubt that they were acquainted with those arts, which, in their time, admitted of an easy application to the purposes of gain. As far as they found a knowledge of the celestial phenomena to be useful in navigation, they were astronomers; and as far as experience taught them the utility of numbers, they were mathematicians. But it is not likely that they should have much leisure or inclination, for prosecuting scientific researches beyond the line of practical application; and such degree of knowledge as their commerce would require could hardly entitle them to the appellation of philosophers. The only remnants of antiquity, which treat of the philosophy of the Phenicians, are sundry fragments of the Cosmogony of Sanchoniathon, preserved by Eusebius and Theodoret. On the authority of Porphyry, Sanchoniathon is said to have written of the affairs of Phenicia before the Trojan war, about the time of Semiramis, and his work is said to have been translated by Philo-Byblius from the Phenician into the Greek language. It seems probable, however, that Philo-Byblius fabricated the work from the ancient cosmogonies, pretending to have translated it from the Phenician, in order to provide the Gentiles with an account of the origin of the world, which might be set in opposition to that of Moses. The fragments attributed to Sanchoniathon, teach, that, from the necessary energy of an eternal principle, active, but without intelligence, upon an eternal passive chaotic mass, arose the visible world—a doctrine of which there are some appearances in the ancient cosmogonies, and which was not without its patrons among the Greeks.

Although, however, little credit seems due to the accounts of Sanchoniathon, we meet with two names among the ancient Phenicians, who, on account of the inventions which have been ascribed to them, deserve to be mentioned. These are, Cadmus and Moschus, both natives of Sidon. Cadmus is celebrated as having, on the settlement of a Phenician colony at Thebes, formed the Greek alphabet on the foundation of the Phenician. That he instituted schools of philosophy at Thebes is the mere conjecture of some modern writers, and merits little attention. Moschus or Mochus, if we

* Contra Jovin. l. c.

dissertation upon the philosophy of the ancients. It would swell to an immense size, were I to treat it in all its extent, which does not suit my plan. I shall content myself, therefore, in

am to credit Jamblichus, lived before the time of Pythagoras. To him is ascribed, on the authority of Posidonius, the Stoic, a system of philosophy which afterwards rose into great celebrity under the Grecian philosophers, Leuippus and Epicurus, called the Atomic. In defence of this it is urged, that the Monads of Pythagoras were the same with the Atoms of Moschus, with which Pythagoras became acquainted during his residence in Phenicia; and that from Pythagoras this doctrine passed to Empedocles and Anaxagoras, and afterwards to Leuippus and Epicurus. To this it may be replied, that the single evidence of Posidonius, who lived so many ages after the time of Moschus, to whom Cicero allows little credit, and of whose authority even Strabo and Sextus Empiricus, who refer to him, intimate some suspicion, is too feeble to support the whole weight of this opinion. But the circumstance which most of all invalidates it, is, that the method of philosophizing by hypothesis or system, which was followed by the Greek philosophers, was inconsistent with the genius and character of the barbaric philosophy, which consisted in simple assertion, and relied entirely upon traditional authority.

Having now gone over, briefly, the more distinguished nations of antiquity, we come to Greece, where philosophy, strictly speaking, was first followed as a regular science. The progress of Grecian philosophy may be marked out by certain eras or noted periods. The first is that which may be called the *Fabulous* or poetic age, in which the theology of the Greeks, constituting almost the whole of their philosophy, was chiefly supported upon traditional fables and the fictions of the poets. To this age belong the names of Prometheus, Linus, Orpheus, Musæus, Eumolpus, Melampus, Amphion, Hesiod, Epimenides, and Homer. The second is that which may be called the *Political* philosophy of Greece, in which philosophy came to be so far separated from theology and religion as to be known, and the study of it followed as a distinct profession. Among the authors of this philosophy were Zeleucus, Triptolemus, Draco, Solon, and Lycurgus; Thales, Chilo, Pittacus, Bias, Cleobulus, Perierander, and Æsop. The third is that which may be called the *Sectarian* philosophy, which owed its birth to Thales and Pythagoras, and was divided into two leading schools, the Ionic and Italic, of which schools there were various sects. Rollin, as has been already observed, will be found to be sufficiently particular in his account of the Sectarian philosophy: and all, therefore, that we propose to do, before dismissing the present note, is, to take a summary view of the periods which preceded the introduction of the Italic and Ionic schools, or of those periods in Grecian philosophy which have been called the *Fabulous* and *Political*—pre-mising, that it is the less necessary to dwell on this subject, as it has already been pretty fully illustrated in various parts of the volume, particularly in the Supplement to the article *Musæus*.

There were anciently in Greece, and in various other countries, men of genius, who, under the name of poets or bards, taught what may be called a mythological philosophy. The fruit of their studies was delivered under ingenious or agreeable fables, in measured sentences or verse, and was suited to captivate the imaginations of men. Of these fables, however, it has now become impracticable to decipher, with certainty, the meaning—a fact which cannot be wondered at, when it is recollected

giving the history and opinions of the most distinguished among these philosophers, with relating what seems most important and instructive, and best adapted to gratify the just

how imperfectly we are acquainted with the history, opinions, manners, and other circumstances of the times when the Grecian mythology was formed, and from what a variety of sources it was derived.

Prometheus is the first of the Greeks who is said to have taught philosophy and the arts. The story of his stealing fire from heaven is well known.* Various conjectures have been formed concerning it. Some have imagined that in the person and fable of Prometheus they have found the history of Adam; others have applied them to Moses; others to Noah. The most beautiful application of the fable is, perhaps, that which supposes it to allude to the introduction of spirituous liquors into the world; and the doom of Prometheus, in having a culture continually gnawing at his liver, renders the allegory harmonious in all its parts.

Linus is celebrated among the first authors of Grecian verse, and is said to have invented Lyric poetry. He wrote a cosmogony, the beginning of which is preserved by Laertius. He was an eminent master of music and verse, and is said to have instructed Hercules, Thamyris, and Orpheus.

The name of Orpheus is as illustrious among the Greeks in the fabulous ages as that of Zoroaster among the Persians, of Buddas among the Indians, or of Thoth or Hermes among the Egyptians. Some account of him will be found in the Supplement to the article *Musæus*, p. 200. He was probably the author of the Eleusinian and Panathænean mysteries, and other religious institutions. It seems to have been owing to the circumstance of his being a Thracian that the Grecian rites of religion were called *Σκηνιστία*. From the fragments of Orpheus, or those attributed to him, the following summary of the Orphic doctrine concerning God and nature may be deduced:—God, from all eternity, contained within himself the unformed principles of the material world, and consisted of a compound nature, active and passive. By the energy of the active principle, he sent forth from himself, at the commencement of a certain finite period, all material and spiritual beings, which partake, in different degrees, of the divine nature. All beings, proceeding originally from God, will, after certain purgations, return to him. The universe itself will be destroyed by fire, and afterwards renewed.—Some writers have ascribed to Orpheus the doctrine since maintained by Spinoza, which confounds the deity with the universe. But the doctrine of emanation, which supposes that the principles of all things were originally in God, and at length flowed from him, is consonant to the general tenor of the Orphic fragments, and is the more likely to have been the real doctrine of Orpheus, as it prevailed, in the most remote times, through the East, and passed thence to the North. The planets and the moon Orpheus conceived to be habitable worlds, and the stars to be fiery bodies like the sun: he taught that they are animated by divinities—an opinion which had been commonly received in the East, and which was afterwards adopted by the Pythagoreans, and other Grecian philosophers. The human soul, Orpheus, after the Thracians and Egyptians, from whom he derived his philosophy, held to be immortal. Diodorus Siculus relates, that he was the first who taught—that is, among the Greeks—the doctrine of the future punishment of the

* Hesiod Oper. v. 46. Theog. v. 520. Ovid Met. l. i. Natalis Comis Mythol. l. iv. c. 6

curiosity of a reader, who considers the actions and principles of these philosophers as an essential part of history, but a part of which it suffices to have a superficial knowledge and

general idea. My guides among the ancients, will be Cicero in his philosophical works, and Diogenes Laertius in his treatise upon the philosophers; and among the moderns, the

wicked, and the future happiness of the good. That this doctrine was commonly received among the followers of Orpheus appears from the following anecdote:—A priest of Orpheus, who was very poor and wretched, boasting to Philip of Macedon, that all who were admitted into the Orphic mysteries would be happy after death—"Why then," said Philip, "do you not immediately die, and put an end to your poverty and misery?"

Museus (of whom also some account will be found in the Supplement to the article Music) was among the most celebrated disciples of Orpheus. His son, Eumolpus, following his steps, wrote concerning the mysteries of Ceres. Thamyris and Amphion were, at the same period, famous for their skill in music and poetry; and Melampus, an Argive, famous in the arts of divination. Besides these worthies, there is, Epimenides, a Cretan, who wrote a theogony, and other poems concerning religious mysteries, and of whom many marvellous fables are related. It is said, that, going by his father's order, in search of a sheep, he laid himself down in a cave, where he fell asleep, and slept for fifty years. Another idle story told of this Cretan is, that he had a power of sending his soul out of his body, and recalling it at pleasure. It is added, that he had familiar intercourse with the gods, and possessed the powers of prophecy. During a plague in Attica, the Athenians sent for him to perform a sacred lustration, in consequence of which it is said, that the gods were appeased, and the plague ceased. He is reported to have lived, after his return to Crete, to the age of 137 years. Divine honours were paid him, after his death, by the superstitious Cretans.

At length Homer arose, to adorn epic poetry with all the invention, and with all the embellishments of which it was susceptible, and to include in it a just copy of human characters, and a display of the popular theology of the Greeks, and of the fables grafted upon it. About the same time Hesiod appeared, to reduce into a more connected view the origin and genealogies of their deities. It is to be observed, that these two poets varied from each other in assigning the first principles of things, out of which all others were generated. The one, without particularly unfolding his idea, ascribes to Oceanus or the watery element, and to Tethys or the earth, the parentage of all things. The other, as if he had considered his subject more attentively, and meant to treat it more philosophically, not only adduces several first principles, as Chaos, Tartarus, Erebus, and Love, but infers some effect produced by their mutual intercourse and action upon one another. His meaning, indeed, is not very plain from his *Theogonia*, as we now have it; but Aristotle and other philosophers generally quote Hesiod, and not Homer, as the primary or most ancient Grecian author of a sort of theory of the constitution of the world from several discordant principles. Some of the admirers of Homer, it is true, in the transport of their zeal, or in the extravagance of their admiration, have endeavoured to transform him into an allegorical poet, who, under the veil of many traditional fables about the gods celestial and terrestrial, concealed physical explications of the phenomena of nature, and the effects of the concords and discords to which the elements are liable. In this light, according to Heraclides Ponticus, and other commentators on Homer, various passages in the *Iliad* and *Odyssey* are to be viewed; while the stretches of fancy made to swell the number of them are sufficient to prove the absurdity of their hypo-

thesis. But, if Homer cannot be granted to have philosophized in this mystical manner, his pretensions to a name in another kind of philosophy, the value of which signalizes him more than that imposed on him by fantastic commentators, may well be admitted. The wonderful capacity and penetration of his mind enabled him either to form to himself, or to embrace the most distinct and just ideas of human actions and characters to an extent that has rendered him a great original in such interesting delineations. His celebrity upon this ground produced the contention that Seneca observes had taken place among the sects of the philosophers, whether he might be most accounted a Platonist or a Peripatetic, an Epicurean or a Stoical philosopher; while, as that author remarks, the justest conclusion appeared to be, that, as he could not surely be appropriated by all of them, neither by some of them more than by others, he truly might be pronounced to belong properly to none of them. The more speculative and critical philosophers, however, condemned him as a moralist, on account of his gross and ignominious fictions about the characters and actions of the gods. This indeed could bear no apology but the insufficient one, that he advanced no opinions of his own, and only, by the license allowed to poets, copied the traditions and fables invented before his time, and which had obtained a general credit. That the natural light of his mind was superior to the belief of its grossest absurdities, there can hardly be a doubt entertained; and from what we gather of his notions of the immortality of human souls, we may presume that he was assisted in it, and in some other topics connected with theology, by what he learned in foreign countries.

That the human soul survived the body, and, at death, fled to the realms of Pluto, or, by the favour of the gods, to the fields of Elysium, is well known to have been the doctrine of the most ancient Grecian poets. But whether this implied an opinion of the soul's natural immortality, is a question of much uncertainty. In some respects, to the departing soul they ascribe a measure of intelligence superior to what it ever had before; and in others, they represent it, even in its separate state, as having an imbecility and weakness below that of its condition in the body. Patroclus, dying, predicts the fall of Hector by the spear of Achilles; and the Trojan chief, prostrate on the ground, discovers yet more prescience, by foretelling the death of that invincible hero by the weak hand of Paris.† In the shades below, the *idola*, or spectres, although not tangible or capable of an embrace, are yet afraid of being wounded by Ulysses' sword;‡ and they have no recollection of what passed in the world until they taste the blood of the victims. 'Strange it is,' exclaims Achilles, after seeing Patroclus' ghost in a dream, 'there must be in the regions below some such spectre or image of the deceased man as I have now beheld, though it be only an airy form. Patroclus in tears, but in his wonted shape, stood by me, and complained of what he had suffered.'§ How long Sisyphus might roll his still recoiling stone, or Tantalus catch at, but not imbibe the fugitive waters, we are left to conjecture. In the Elysian fields, where departed souls are said to lead the happiest life—even there they are represented as not in a perfect state of contentment. They follow still, as they can, their

• Epist. 68.

† Odys. lib. xi.

‡ Iliad, lib. xxii.

§ Iliad, lib. xxiii.

learned Englishman Mr. Stanley, who has composed an excellent work upon this subject.

I shall divide my dissertation into two parts. In the first, I shall relate the history of the

philosophers, without dwelling much upon their opinions: in the second, I shall treat the history of philosophy itself, and the principal maxims of the different sects.

wonted pursuits, however vain and fantastic; or they wander about, dejected and sad, for their abrupt or premature removal from the scenes of the earth.

Without entering into a minute examination of passages, it appears, upon considering the whole mythological doctrine of Homer about the gods and human souls, that it conveyed no other conception of an immaterial substance, but that of a more subtle, active, and indissoluble body; and that the idea of a distinct nature, either in divine beings or in men, was not entertained until a more accurate philosophy was, in a subsequent age, imported into Greece; and that, as the opinion of the immateriality of celestial beings was connected with that of one eternal and invisible mind in the universe, so the notion of the natural immortality of human souls was generally supported upon the persuasion of their pre-existence to the bodily state, and their appointment to certain vicissitudes in it. The tenet of their immortality upon this ground, Herodotus affirms to have been first taught by the Egyptians, and from them communicated to the Greeks, although some of his countrymen assumed it as their own invention. It was, as he understood it, to this purpose: that the human soul, for the sake either of punishment or purgation, was ordained to roll through all the variety of animal bodies, whether those of the earth, the water, or the air; and, having completed its course of such vicissitudes, in the space of three thousand years, it then returned to animate a human bodily form. But this doctrine, or what was similar to it, was by no means peculiar to the Egyptians. It obtained among the Celts of Gaul, whose Druids taught that the human soul did not perish, but passed from one body to another, and held also this general principle, that all things which were in existence, although changeable in their corporeal forms, retained still their distinct natures or essences. The immortality of the soul was the boasted principle of the Scythian Getae, who got their particular denomination from it; and, together with that of the transmigration of the soul, was generally spread among the eastern nations, as the common doctrine of their philosophers.

From the survey now taken of the philosophy of the Greeks in the poetic age, we may understand to what it amounted. One principle in it was that of a cosmogony, or a generation of the world in time, either from Chaos, or Night, according to Hesiod, or from Water and Earth, as Homer states it. The conception, that *the world had a beginning of its existence*, may be allowed to be the one most natural to the human mind; and hence it was the most ancient opinion, and that which generally prevailed among the philosophic class of mankind, in opposition to an inconceivable *eternity of generation*. Nothing, however, could be more irrational than the use which was made of this principle by the Greek poets. They founded upon it what has been called their Theological Philosophy, marked with this strangest of all paradoxes, that gods, or divine beings, originated either from some primary state of things, called by an unintelligible name, that could stand for nothing, or from parts of matter, to which that which signified any thing animated, sensitive, or rational, not to say human or divine, could never be applied.

The Greek bards adapted the subjects and embellishments of their songs to the taste of their countrymen. By their fictions, they may be said to have turned Greece, in most of its districts, into romantic ground: scarcely a city, a mountain, a plain, a grove, or stream,

but what was celebrated in song as the haunt of one or more of their numberless divinities. The imaginations of the Greeks were captivated with these poetic tales, calculated, as they were, to move all the springs of the human passions. For a course of near three centuries, no rational speculation seems to have been entered upon, nor any inquiry made, with respect to the origin of the world, or a first principle of things, beyond what Homer and Hesiod had thrown out in their poems, until Thales and Pythagoras appeared; or, if there were any such productions, they were allowed, like the genuine poems of Orpheus, to sink into obscurity and oblivion. In the neglect and disregard of all study and literary improvement, but that of the poetic kind, the shrines of the gods maintained the highest reputation, and their oracles were consulted not only about such events as human wisdom could not foresee, but with respect to those which required no extraordinary share of natural sagacity or penetration to comprehend. From the belief, that every considerable resolution or step to be taken in life ought to proceed upon some oracular authority, the exercise of common reason appeared to be altogether suspended among the vulgar. To unloose this fetter upon the human mind, beside the requisite of superior judgment, it was necessary that those who first attempted it, should have obtained, in a way not liable to misconception, a measure of public credit and esteem, for the rectitude and probity of their counsels and advice. It was in this manner, that philosophy, wearing her simplest garb, and venturing upon embarrassed ground with a timid step, may be said to have made her appearance in the character of those men, called the sages of Greece. Although far from pretending to bring their wisdom in competition with that of the interpreters of the will of the gods, as the prophets and priests styled themselves, yet the reputation they had acquired for ingenious sentiments on many subjects, for knowledge in matters of civil polity, and for prudent and virtuous conduct in private life, caused men to look upon the exertions of the human faculties with a more respectful eye, and to consider them as sources of wisdom more tractable, perspicuous, and evident, than were generally the dark and ambiguous responses given by the oracles.

The names, commonly included under the appellation of the Seven Wise Men of Greece, are, Thales, Solon, Chilo, Pittacus, Bias, Cleobulus, and Periander. It is not necessary to enter here into any detailed account respecting these sages, as Rollin has been sufficiently diffuse on the subject in the first volume of *The Ancient History*. Thales, as one of the fathers of Grecian philosophy, and founder of the Ionic sect, is noticed in the text above. Of the others, the following slight notices may be given.

Solon was born at Salamis, of Athenian parents; and in the third year of the 46th Olympiad, was created archon of Athens, with the united powers of supreme legislator and magistrate. He made a new distribution of the people, instituted new courts of judicature, and framed a judicious code of laws, which afterwards became the basis of the laws of the twelve tables in Rome. He travelled to Egypt, where he became acquainted with several of the more eminent priests of Heliopolis and Sais, by whom he was instructed in the Egyptian philosophy. From Egypt he sailed to Cyprus, where he formed an intimate friendship with Philocyprus, one of the

PART FIRST.

HISTORY OF THE PHILOSOPHERS.

I shall run over all the sects of ancient philosophy, and give a brief history of the philosophers, who distinguished themselves most in each.

princes of the island, and assisted him in founding a new city. It is also related, that he visited Croesus, king of Lydia. He died in the Island of Cyprus, about the 80th year of his age. Statues were erected to his memory, both at Athens and Salamina. His thirst after knowledge continued to the last. 'I grow old,' said he, 'learning many things.' Among the apothegms and precepts attributed to him are the following:—'Laws are like cobwebs, that entangle the weak, but are broken through by the strong.' 'He who has learned to obey will know how to command.' 'In all things let reason be your guide.' 'In every thing that you do consider the end.'

Chilo was one of the Lacedæmonian Ephori, and executed the offices of magistracy with so much uprightness, that in his old age, he said, that he recollected nothing in his public conduct which gave him regret, except that, in one instance, he had endeavoured to screen a friend from punishment. He lived to a great age, and at last expired, through excess of joy, in the arms of his son, when he returned victorious from the Olympic games. Among his precepts and maxims are these:—'Three things are difficult: to keep a secret, to bear an injury patiently, and to spend leisure well.' 'Visit your friend in misfortune, rather than in prosperity.' 'Never ridicule the unfortunate.' 'Think before you speak.' 'Do not desire impossibilities.' 'Gold is tried by the touchstone, and men are tried by gold.' 'Honest loss is preferable to shameful gain; for by the one, a man is a sufferer but once; by the other, always.' 'If you are great, be condescending; for it is better to be loved than to be feared.' 'Reverence the aged.' 'Know thyself.'

Pittacus was of Mytilene in Lesbos, and born in the 32d Olympiad. He was intrusted with the command of a fleet in a war with the Athenians, in the course of which he challenged the Athenian commander, Phryno, to single combat, and by the dexterous use of a net, which he concealed behind his buckler, easily made him his prey. From that time, he was intrusted by the Mytilenians with supreme power in the state; and when he had established such regulations in the island as promised to secure its peace and prosperity, he voluntarily resigned his office, and retired into private life. The following maxims and precepts are ascribed to him:—'The first office of prudence is to foresee threatening misfortunes, and to prevent them.' 'Power discovers the man.' 'Never talk of your schemes before they are executed.' 'Whatever you do, do it well.' 'Do not that to your neighbour which you would take ill from him.' 'Be watchful for opportunities.'

Bias was of Priene in Ionia, and acquired the name and honours of a wise man chiefly by his generosity and public spirit. He redeemed several young female captives, and educated them as his own daughters; after which he restored them, with a dowry, to their parents. During an invasion, some one observing that he took no pains to preserve any thing, *Bias* replied, 'I carry all my treasures with me.' The following are among his maxims:—'The greatest infelicity is, not to be able to endure misfortunes patiently.' 'Be not unmindful of the miseries of others.' 'If you are handsome, do

CHAPTER I.

HISTORY OF THE PHILOSOPHERS.

Of the Ionic Sect, to their Division into Various Branches.

The Ionic sect, to reckon from Thales, who is considered as the founder of it, down to

handsome things; if deformed, supply the defects of nature by your virtues.' 'Be slow in undertaking, but resolute in executing.' 'Praise not a worthless man for the sake of his wealth.' 'Many men are dishonest; therefore love your friend with caution, for he may hereafter become your enemy.'

Cleobulus, of Lindus in Rhodes, was chiefly famous for solving enigmas and obscure questions. He excelled all his contemporaries in bodily strength and beauty. His maxims were:—'Be kind to your friends, that they may continue such; and to your enemies, that they may become your friends.' 'Happy is the family, where the master is more loved than feared.' 'When you go abroad, consider what you have to do: when you return home, what you have done.' 'Marry among your equals, that you may not become a slave to your wife's relations.' 'Be more desirous to hear than to speak.' 'Avoid excess.'

Periander of Corinth is the last of the Seven Wise Men of Greece who remains to be mentioned. He gave great offence to his countrymen by the rigour of his discipline, and rendered himself obnoxious to the other Greek states by changing the form of government in Corinth from an aristocracy to a tyranny or monarchy. The inscription upon his tomb at Corinth, preserved by Laertius, proves, however, that his countrymen, after his death, honoured him as a wise and able ruler. He died in the fourth year of the 48th Olympiad, aged eighty-eight years. Among the moral sentences ascribed to him are the following:—'Let the prince, who would reign securely, trust rather to the affection of his subjects than to the force of arms.' 'Pleasure is precarious, but virtue is immortal.' 'Conceal your misfortunes.' 'Study to be worthy of your parents.' 'There is nothing which prudence cannot accomplish.'

Although historians have generally agreed to give these Sages the appellation of the Seven Wise Men of Greece, we are not to suppose that there were not at this period many others, equal in merit, and perhaps not inferior in fame. Among these we must not omit to mention *Æsop*, the celebrated fabulist. He was probably a Phrygian by birth. It is related, that he was brought as a slave to Athens; and passed into the possession of Rhodope, a celebrated courtizan, who gave him his liberty; that, upon this, he travelled from Greece into Egypt and Asia; and that, being sent by Croesus to Delphos, with a magnificent present of gold to Apollo, the Delphians quarrelled with him, and put him to death. But these relations are obscured by so many chronological inconsistencies, that they deserve little credit. In the fourteenth century, a monk named Palæudes wrote a life of *Æsop*; but his relation is unsupported by authorities, and has every internal mark of fiction. We can therefore assert nothing farther concerning *Æsop*, than that he was the author of many moral apologues, which were the foundation of that collection of fables, which, under his name, has, for so many ages, delighted mankind.

We have now arrived at the period in which *Rollin's* treatise on philosophy commences—the period, namely,

Philo and Antiochus that Cicero heard, flourished above five hundred years.

THALES.

Thales was of Miletus, a famous city of Ionia.¹ He was born in the first year of the 35th Olympiad, A. M. 3364, Ant. J. C. 640. To improve himself in the knowledge of the most learned persons of those times, he made several voyages, according to the custom of the ancients; at first into the Island of Crete, then into Phenicia, and afterwards into Egypt, where he consulted the priests of Memphis, who cultivated the superior sciences with extreme application. Under these great masters he learned geometry, astronomy, and philosophy. A pupil of this kind does not long continue so. Thales accordingly proceeded very soon from lessons to discoveries. His masters of Memphis learned from him the method of measuring exactly the immense pyramids which still stand.

Egypt was at that time governed by Amasis, a prince who loved letters, because he was very learned himself. He set all the value it deserved upon the merit of Thales, and gave him public marks of his esteem. But that Greek philosopher, who was fond of liberty and independence, had not the talents for supporting himself in a court. He was a great astronomer, a great geometrician, and an excellent philosopher, but a bad courtier. The too free manner in which he declaimed against tyranny, displeased Amasis, and made him conceive impressions of distrust and fear of him, to his prejudice, which he did not take too much pains to remove, and

which were followed soon after with his entire disgrace. Greece was the better for it. Thales quitted the court, and returned to Miletus to diffuse the treasures of Egypt in the bosom of his country.

The great progress he had made in the sciences, occasioned his being ranked in the number of the seven sages of Greece, so famed among the ancients. Of these seven sages, only Thales founded a sect of philosophers, because he applied himself to the contemplation of nature, formed a school and a system of doctrines, and had disciples and successors. The others made themselves remarkable only by a more regular kind of life, and some precepts of morality which they gave occasionally.

I have spoken elsewhere of these sages with some extent, as well as of many circumstances of the life of Thales: of his residence in the court of Croesus, king of Lydia, and his conversation with Solon. I have repeated there the sensible pleasantry of a woman, who saw him fall into a ditch, whilst he was contemplating the stars: "How," said she to him, "should you know what passes in the heavens, when you do not see what is just at your feet?" and his ingenious manner of evading his mother when she pressed him earnestly to marry, by answering her when he was young, "It is too soon yet," and after his return from Egypt, "It is too late now." The reasons which had prevented Thales from giving himself chains by entering into the married state, made him prefer a life of tranquillity to the most splendid employments. Prompted by a warm desire of knowing nature, he studied it assiduously in

1 Diog. Laert.

in which the teachers of philosophy came to be divided into schools and sects—and we shall conclude this note with an observation or two upon the abilities and characters of those who received the title of Wise Men. Studied maxims with regard to human life in general, and the prudent conduct of it in particular situations, joined with the capacity of advising and acting properly in the offices of civil government, were what chiefly distinguished them. To moralize upon life and manners was, next to that of prescribing the first rules of civil society, the earliest indications of the reflections and improvements of the human mind. It had taken place long before the sages appeared, and made part of the ancient poetry; out of which that profusion of moral sentences thrown out by them was, probably, in a great measure collected. They did no more than make some additions to them in a similar style. They delivered no particular explications of the rationality of their maxims, unless, perhaps, when they were by any called in question, or scorned. They distinguished not the cases when they might be found more or less applicable; and little considered whether they were, upon the whole, consistent with one another. They presented, therefore, no con-

nected view of moral principles; but, like those who bring together the materials of an edifice in their simplest form, they left to others the more ingenious part of adapting them to the structure, and giving them the polish and symmetry which a regular system required. In the simplicity of the age in which they appeared, this skill could hardly be expected, and was not looked for. Men were then contented with receiving the wise rule or precept, without having all the reasons of it unfolded to them. Of honest and worthy characters, practical teachers of morals, although not recognised under the title of Speculative Philosophers, several of them, as Chilo, Pittacus, and Bias, bore the first offices of magistracy in their several cities, and were remembered with honour for their eminent services in that capacity. They likewise may be considered as the first who raised the esteem of characters marked with the civil virtues alone, and separate from the dazzling accessories of military prowess and warlike glory; and the admission which some of them had to the courts of princes, upon the reputation of their virtue and knowledge, held out an excellent lesson to the world of the intrinsic value of these qualities, and was a proof that they fail not to excite admiration even where they are generally little practised or understood.—Ed.

the happy leisure, which a strict retirement afforded him, impenetrable to tumult and noise, but open to all whom the love of truth, or occasion for his counsel, brought to him. He quitted it very rarely; and that only to take a frugal repast at the house of his friend Thrasybulus, who by his abilities became king of Miletus at the time of the treaty made by that city with Alyattes king of Lydia.

Cicero tells us,¹ that Thales was the first of the Greeks who treated the subject of physics. The glory of having made several fine discoveries in astronomy is ascribed to him: of which one, that relates to the magnitude of the sun's diameter compared with the circle of his annual motion, gave him great pleasure. Accordingly a rich man, to whom he had imparted it, offering that philosopher whatever reward he thought fit for it, Thales asked him no other, but that he would give the honour of the discovery to its author. This is an instance of the character of the learned, who are more sensible to the honour of a new discovery than to the greatest rewards; and of the truth of what Tacitus says in speaking of Helvidius Priscus, "That the last thing the wise themselves renounce, is the desire of glory."² He distinguished himself by his ability in foretelling the eclipses of the sun and moon with great exactness, which was considered in those times as a very wonderful matter.

St. Clemens Alexandrinus repeats two fine sayings of Thales, after Diogenes Laertius. Being asked one day what God was, he answered, "That which has neither beginning nor end."³ Another asking him whether a man could conceal his actions from God: "How can that be," replied he, "as it is not in his power to conceal even his thoughts from him." Valerius Maximus adds, that Thales spoke thus, that the idea of God's presence to the most secret thoughts of the soul might induce men to keep their hearts as pure as their hands.⁴ Cicero makes exactly the same remark, though in terms something different. Thales, says he, who was the wisest of the seven sages, believed it of the last importance for men to be convinced, that the Divinity filled all places, and saw all things, which would ren-

der them in consequence wiser and more religious.⁵

He died in the first year of the 56th Olympiad, A. M. 3456, Ant. J. C. 548, while present at the celebration of the Olympic games, aged ninety-two.

ANAXIMANDER.

Thales had for his successor Anaximander, his disciple and countryman. History has preserved no particular circumstances of his life. He departed from his master's doctrine in many points. It is said⁶ that he forewarned the Lacedæmonians of the dreadful earthquake, which destroyed their city. He was succeeded by Anaximenes.

ANAXAGORAS.

Anaxagoras, one of the most illustrious philosophers of antiquity, was born at Clazomenæ in Ionia, about the 70th Olympiad, A. M. 3458, Ant. J. C. 500, and was the disciple of Anaximenes. The nobility of his extraction, his riches, and the generosity which induced him to abandon his patrimony, rendered him very considerable. Believing the cares of a family and an estate obstacles to his taste for contemplation, he renounced them absolutely, in order to devote his whole time and application to the study of wisdom, and the inquiry after truth, which were his only pleasures.⁷ When he returned into his own country after a long voyage, and saw all his lands lying abandoned and uncultivated, far from regretting the loss, he cried out, "I should have been undone, if all this had not been ruined."⁸ Socrates, in his ironical way, affirmed that the sophists of his time had more wisdom than Anaxagoras; as, instead of renouncing their estates like him, they laboured strenuously to enrich themselves, convinced as they were of the stupidity of old times, and that "the wise man ought to be wise for himself," that is to say, that

¹ Cic. de Nat. Deor. l. i. n. 25. Apul. Florid.

² Erant quibus appetentior famæ videbatur, quando etiam sapientibus cupido gloriæ novissima exiit. Tacit. Hist. l. iv. c. 6.

³ Rogatus Thales quid sit Deus? Id, inquit, quod neque habet principium, nec finem. Cùm autem rogasset alius, an Deum lateat homo aliquid agens: et quomodo, inquit, qui ne cogitans quidem?

⁴ Mirificè Thales. Nam interrogatus an facta hominum deos fallerent; nec cogitata, inquit. Ut non solum manus, sed etiam mentes puras habere vellemus; cùm secretis cogitationibus nostris cœleste numen adesse crederemus. Val. Max. l. vii. c. 2.

⁵ Thales, qui sapientissimus inter septem fuit, dicebat, Homines existimare oportere deos omnia cernere, decernere omnia esse plena: fore enim omnes castiores. Cic. de leg. l. xxxvi. n. 2.

⁶ Cic. de Divin. l. i. n. 112.

⁷ Quid aut Homero ad delectationem animi ac voluptatem, aut cuiquam docto defuisse unquam artistrasur? An, ni ita se res haberet, Anaxagoras, aut hic ipse Democritus, agros et patrimonia sua reliquissent, huic discendi quærendique divinæ delectationi toto se animo dedidissent? Cic. Tuscul. Quæst. l. v. n. 114, 115.

⁸ Cum à diutina peregrinatione patriam repetisset, possessionesque desertas vidisset: Non rati, inquit, ego salus, nisi ista perissent. Val. Max. l. viii. c. 7. Plut. in Hippo. maj. p. 283.

they ought to employ their whole pains and industry in amassing as much money as possible.

Anaxagoras, in order to apply himself wholly to study, renounced the cares and honours of government. No man however was more capable of succeeding in public affairs. We may judge of his abilities in that way from the wonderful progress made by his pupil Pericles in policy. It was to him he was indebted for those grave and majestic manners, that rendered him so capable of governing the commonwealth.⁹ It was he who laid the foundation of that sublime and triumphant eloquence, which acquired him so much power; and who taught him to fear the gods without superstition. In a word, he was his counsellor, and assisted him with his advice in the most important affairs, as Pericles himself declared.¹⁰ I have elsewhere mentioned the little care the latter took of his master, and that Anaxagoras wanting the necessities of life, resolved to suffer himself to die of hunger. Pericles upon this news flew to his house, and earnestly entreated him to renounce so melancholy a resolution; "When one would use a lamp," replied the philosopher, "one takes care to supply it with oil, that it may not go out." Wholly engrossed in the study of the secrets of nature, which was his passion, he had equally abandoned riches and public affairs. Upon being asked one day,¹¹ whether he had no manner of regard for the good of his country; "Yes, yes," said he, lifting up his hand towards heaven, "I have an extreme regard for the good of my country." He was asked another time to what end he was born; to which he answered, "To contemplate the sun, moon, and skies." Is that then the end to which man is destined?

He came to Athens at the age of twenty, about the first year of the 75th Olympiad, A. M. 3434, Ant. J. C. 490, very near the time of Xerxes's expedition against Greece.¹² Some authors say, that he brought thither the school of philosophy, which had flourished in Ionia from its founder Thales. He continued and taught at Athens during thirty years.

The circumstances and event of the prosecution fomented against him at Athens for impiety are differently related. The opinion of those, who believe that Pericles could find no surer method for preserving that philosopher, than to make him quit Athens, seems the most probable. The reason, or rather the pretext, for so heavy an accusation was, that, in teaching upon the nature of the sun, he defined it "a mass of burning matter;" as if he had thereby degraded the sun, and excluded it from the number of the gods. It is not easy to comprehend, how in so learned a city as Athens, a philosopher should not be

allowed to explain the properties of the stars by physical reasons, without hazarding his life. But the whole affair was an intrigue and a cabal of the enemies of Pericles, who were for destroying him, and endeavoured to render himself suspected of impiety, from his great intimacy with this philosopher.

Anaxagoras was found guilty through contumacy, and condemned to die. When he received this news, he said, without showing any emotion: "Nature has long ago passed sentence of death upon my judges, as well as me." He remained at Lampsacus during the rest of his life. In his last sickness, upon his friends asking him, whether he would have his body carried to Clazomenæ after his death: "No," said he, "that is unnecessary. The way to the infernal regions" is as long from one place as another."¹³ When the principal persons of the city came to receive his last orders, and to know what he desired of them after his death; he replied, nothing, except that the youth might have leave to play every year upon the day of his death. This was done accordingly, and continued a custom to the time of Diogenes Laertius. He is said to have lived sixty-two years. Great honours were paid, and even an altar erected, to him.

ARCHELAUS.

Archelaus, of Athens according to some, and of Miletus according to others, was the disciple and successor of Anaxagoras, in whose doctrine he made little alteration. Some say that it was he who transported philosophy from Ionia to Athens. He confined himself principally to physics, as his predecessors had done: but he introduced ethics a little more than them. He formed a disciple, who placed them highly in honour, and made them his capital study.

SOCRATES.

This disciple of Archelaus was the famous Socrates, who had been also the pupil of Anaxagoras. He was born in the fourth year of the 77th Olympiad, A. M. 3534, and died the first of the 95th, A. M. 3604, after having lived seventy years.

Cicero has observed in more than one place,¹⁵ that Socrates, considering that all the vain speculations upon the things of nature tended to nothing useful, and did not contribute to render

¹³ Infernal regions, or hell. The ancients understood by this word the place to which the souls of all men go after death.

¹⁴ Nihil necesse est, inquit: undique enim ad inferos tantundem via est. Cic. 1. *Tusc.* n. 104.

¹⁵ Academ. Quest. 1. l. n. 13.

⁹ Plut. in Peric. p. 153.

¹¹ Diog. Laert.

¹⁰ Ibid. p. 162.

¹² Ibid.

man more virtuous, devoted himself solely to the study of morality. "He was the first," says he, "who brought philosophy down from heaven," where she had been employed till then in contemplating the course of the stars; "who established her in cities, introduced her into private houses, and obliged her to direct her inquiries to what concerned the manners, duties, virtues, and vices of life."¹ Socrates is therefore considered with reason as the founder of moral philosophy among the Greeks. This was not because he had not perfectly studied the other branches of philosophy: he possessed them all in a supreme degree, having industriously formed himself in them. But as he judged them of little use in the conduct of life, he made little use of them: and, if we may believe Xenophon,² he was never heard in his disputes to mention either astronomy, geometry, or the other sublime sciences, that had solely employed preceding philosophers; in which Xenophon seems designedly to contradict and refute Plato, who often puts subjects of that kind into the mouth of Socrates.

I shall say nothing here either of the circumstances of the life and death of Socrates, or of his opinions: I have done that elsewhere with sufficient extent. It only remains for me to speak of his disciples, who though all of them made it their honour to acknowledge Socrates their chief, were divided in their opinions.

XENOPHON.

Xenophon was certainly one of the most illustrious disciples of Socrates, but did not form a sect; for which reason I separate him from the rest. He was as great a warrior as philosopher. I have related at large the share he had in the famous retreat of the Ten Thousand. His adherence to the party of young Cyrus, who had declared himself openly against the Athenians, drew upon him their hatred, and occasioned his banishment. After his return from the expedition against Artaxerxes, he attached himself to Agesilaus king of Sparta, who then commanded in Asia.³ As Agesilaus knew perfectly well how to distinguish merit, he had always a most peculiar regard for Xenophon, and upon being recalled by the Ephori for the defence of his country, carried the Athenian general thither along with him. Xenophon after various events retired to Corinth with his two sons, where he passed the rest of his days. In the war between the Thebans and Lacedæmonians, when the

people of Athens resolved to aid the latter, he sent his two sons to that city. Gryllus signalized himself in a peculiar manner in the battle of Mantinea, and some pretend that it was he who wounded Epaminondas in the action. He did not survive so glorious an exploit long, but was killed himself. The news of his death was brought to his father, whilst he was offering a sacrifice. Upon hearing it he took the wreath from his head; but upon being informed by the courier, that his son fell fighting gloriously, he immediately put it on again, and continued the sacrifice without shedding a single tear, saying coldly, "I knew the son to whom I gave life was not immortal." Might not this be called a constancy, or rather hardness of heart, truly Spartan?

Xenophon died in the first year of the 105th Olympiad, A. M. 3644, Ant. J. C. 360, aged ninety.

I shall speak elsewhere of his works. He was the first who reduced to writing, and published the discourses of Socrates, but exactly as they came from his mouth and without any additions of his own, as Plato made to them.

It is pretended that there was a secret jealousy between these two philosophers, little worthy of the name they bore, and the profession of wisdom upon which they both piqued themselves: and some proofs are given of this jealousy.⁴ Plato never mentions Xenophon⁵ in any of his books, which are very numerous, nor Xenophon him, though they both frequently speak of the disciples of Socrates. Besides, all the world knows that the *Cyropædia* of Xenophon is a book, in which, relating the history of Cyrus, whose education he extols, he lays down the model of an accomplished prince, and the idea of a perfect government. We are told, that he composed this piece with no other design but to contradict Plato's *Commonwealth*, which had lately appeared; and that Plato was so angry upon that account, that to discredit this work, he spoke of Cyrus, in a book which he afterwards wrote, as of a prince indeed of great courage and love of his country, but one, whose education had been very bad.⁶ Aulus Gellius, who relates what I have now said, cannot imagine that two such great philosophers as those in question, could be capable of so mean a jealousy; (it is however but too common among men of letters) and he chooses rather to ascribe it to their admirers and partisans. And indeed it often happens that disciples, through a too partial zeal, are more delicate

¹ Socrates primus philosophiam devocavit à cælo, et in urbibus collocavit, et in domos ætiam introduxit, et cœgit de vita et moribus, rebusque bonis et malis querere. (C. T. *Tusc. Quest.* l. v. n. 10.)

² *Epist. ad. Eschin.*

³ *Diog. Laert.*

⁴ *Aul. Gell.* l. xiv. c. 3.

⁵ Vossius has observed that Xenophon has spoke once of Plato, but only in mentioning his name. *Memorab.* l. iil. p. 772.

⁶ *De leg.* l. iil. p. 607.

⁷ *Ἰλαρίδιος δὲ ἀφ' οὗ τοῦ ἡρώδου ἐκείνου ἐκείνου.*

in respect to the reputation of their masters, and urge what concerns them with greater warmth, than themselves.

CHAPTER II.

Division of the Ionic Philosophy into Different Sects.

Before Socrates there had been no different sects among the philosophers, though their opinions were not always the same: but from his time many rose up, of which some continued longer in vogue, and others were of shorter duration. I shall begin with the latter, which are the Cyrenaic, Megarean, Elian, and Eretrian sects. They take their names from the places where they were instituted.

ARTICLE I.

Of the Cyrenaic Sect.

ARISTIPPUS.

Aristippus was the chief of the Cyrenaic sect.^b He was originally of Cyrene in Libya. The great reputation of Socrates induced him to quit his country, in order to settle at Athens and to have the pleasure of hearing him. He was one of that philosopher's principal disciples: but he led a life very repugnant to the precepts taught in that excellent school, and when he returned into his own country, opened a very different course for his disciples. The great principle of his doctrine was, that the supreme good of man during this life is pleasure. His manners did not belie his opinions, and he employed a ready and agreeable turn of wit in eluding, by pleasantries, the just reproaches made him on account of his excesses. He perpetually abandoned himself to feasting and women. When he was rallied upon his intercourse with the courtesans Lais: "True," said he, "I possess Lais but not Lais me." Upon being reproached for living with too much splendour, he replied: "If good living were a crime, there would not be so much feasting on the festivals of the gods.

The reputation of Dionysius the tyrant, whose court was the centre of pleasures, whose purse was said to be always open to the learned, and whose table was always served with the utmost magnificence, drew him to Syracuse. As his wit was supple, ready, and insinuating, and he omitted no occasion of soothing the prince, and bore his raillery and intervals of bad humour

with a patience next to slavish, he had abundance of credit in that court. Dionysius asking him one day, why philosophers were always seen in the houses of the great, and the great never in those of philosophers? "It is," replied Aristippus, "because philosophers know what they want, and the great do not."

"If Aristippus could content himself with herbs," said Diogenes the Cynic to him, "he would not be so base as to court princes." "If my crible," replied Aristippus, "knew how to make his court to princes, he would not content himself with herbs."

Si pranderet olus patienter, Regibus uti
Nollet Aristippus. Si sciret Regibus uti
Fastidiret olus qui me notat. *Hor. Ep. xvii. l. 1.*

The one's view was good living, the other's to be admired by the people.

Scurror ego ipse mihi, populo tu.

And which is best? Horace without hesitating, gives Aristippus the preference, whom he praises in more than one place. He resembled him¹⁰ much himself, not to do so. However he does not abandon himself to the principle of Aristippus; and falls insensibly into them by propensity of nature.

Nunc in Aristippi furtim præcepta relabor.
Id. Ep. l. 1. l.

So mean is the love of pleasure, that let those who give themselves up to it dissemble ever so well, they cannot entirely conceal their shame!

Aristippus was the first disciple of Socrates that took a certain premium from those he taught, which gave his master great offence. Having demanded fifty drachmas of a man for teaching his son: "How! fifty drachmas,"¹¹ cried the father! "Why that's enough to buy a slave." "Indeed?" replied Aristippus, "buy him then, and you'll have two."

Aristippus died on his return from Syracuse to Cyrene. He had a daughter, named Areta, whom he took great care to educate in his own principles, in which she became a great proficient. She instructed her son Aristippus, sur-named *μετὰ τὸν πατέρα* in them herself.

THEODORUS.

Theodorus, the disciple of Aristippus, beside the other principles of the Cyrenaics, publicly taught that there were no gods.¹² The people of Cyrene banished him. He took refuge at Athens, where he would have been tried and condemned in the Areopagus, if Demetrius

^b Laert.

¹⁰ Ne Aristippus quidem ille Socraticus erubuit, cum esset objectum habere eum Lais: Habeo, inquit, Laisa, non habeo à Laide. *Cic. Ep. xxvi. l. 9. Ad. Fam.*

¹¹ About 25 shillings.

¹² Laert.

Phalereus had not found means to save him. Ptolemy the son of Lagus received him into his service, and sent him once as his ambassador to Lysimachus. The philosopher spoke to that prince with so much impudence, that one of his ministers, who was present, said, "I fancy, Theodorus, you imagine there are no kings, as well as no gods."

It is believed that this philosopher was at last condemned to die, and obliged to take poison.

We see here that the impious doctrine of atheism, contrary to the general and immemorial belief of mankind, scandalized and offended all nations so much, as to be deemed worthy of death. It owes its birth to teachers abandoned to the debaucheries of women and the table, and who propose to themselves the pleasures of the senses as the great ends of being.

ARTICLE II.

Of the Megarian Sect.

It was instituted by Euclid, who was of Megara, a city of Achaia, near the Isthmus of Corinth. He actually studied under Socrates at Athens, at the time of the famous decree, that partly occasioned the Peloponnesian war, by which the citizens of Megara were prohibited to set foot in Athens upon pain of death. So great a danger could not abate his zeal for the study of wisdom. In the disguise of a woman he entered the city in the evening, passed the night with Socrates, and went back before light, going regularly every day almost ten leagues forwards and backwards.¹ There are few examples of so warm and constant an ardour for knowledge. He departed very little from his master's opinions. After the death of Socrates, Plato and other philosophers, who apprehended the effects of it, retired to him at Megara, who gave them a very good reception. His brother one day in great rage upon some particular subject of discontent, saying to him: "May I perish if I am not revenged on you." "And may I perish," replied Euclid, "if my kindness does not at length correct this violence of your temper, and make you as much my friend as ever."

The Euclid of whom we speak, is not Euclid the mathematician, who was also of Megara, but flourished above ninety years after under the first of the Ptolemies.

His successor was Eubulides, who had been his disciple. Diodorus succeeded the latter. We find in the sequel, that these three philosophers contributed very much to the introduction into logical disputations of a bad taste for subtle reasonings, founded solely upon sophisms.

¹ Amplius viginti millia.

I shall almost pass over in silence what regards the Elian and Eretrian sects, which include few things of any importance.

ARTICLE III.

Of the Elian and Eretrian Sects.

I place these two sects together, and reduce what I have to say of them to a few words, as they contain nothing important.

The Elian sect was founded by Phaedon, one of the favourite disciples of Socrates. He was of Elis in Peloponnesus.

The Eretrian was so called from Eretria a city of Eubœa, the country of Menedemus its founder.

ARTICLE IV.

Of the three Sects of Academies.

Of all the sects the school of Socrates brought forth, the most famous was the *Academic*, so called from the place where they assembled, which was the house of an ancient hero of Athens, named *Academus*, situated in the suburbs of that city, where Plato taught. We have seen in the history of Cimon the Athenian general, who sought to distinguish himself no less by his love for learning and learned men than his military exploits, that he adorned the academy with fountains and walks of trees for the convenience of the philosophers who assembled there. From that time all places, where men of letters assemble, have been called *Academies*.

Three Academies, or sects of Academies, are reckoned. Plato was the founder of the *ancient*, or first. Arcesilaus, one of his successors, made some alterations in his philosophy, and by that reformation founded what is called the *middle* or second academy. The *new*, or third academy, is attributed to Carneades. We shall soon see wherein their difference consisted.

SECT. I.

Of the Ancient Academy.

Those who made it flourish in succession to one another were Plato, Speusippus, Xenocrates, Polemon, and Crantor.

PLATO.

Plato was born in the first year of the 68th Olympiad, A. M. 3576, Ant. J. C. 428. He was at first called Aristocles from the name of his grandfather; but his master of the *Palestra* called him Plato from his large and broad

shoulders, which name he retained. Whilst he was an infant in arms, sleeping one day under a myrtle, a swarm of bees settled upon his lips, which was taken for an omen, that the child would prove very eloquent, and distinguish himself highly by the sweetness of his style. This came to pass, whatever we may think of the augury; whence the surname of *Apis Attica*, Athenian bee, was given him. He studied grammar, music, and painting, under the most able masters. He applied himself also to poetry, and even composed tragedies, which he burned at the age of twenty, after having heard Socrates. He attached himself solely to that philosopher; and as he was exceedingly inclined to virtue by nature, made such improvements from the lessons of his master, that at twenty-five he gave extraordinary proofs of his wisdom.

The fate of Athens was at that time (A. M. 3600, Ant. J. C. 404,) very deplorable. Lysander the Lacedæmonian general had established the thirty tyrants there. Plato's merit, which was already well known, induced them to use their utmost endeavours to engage him in their party, and to oblige him to share in the affairs of the government. To this he consented at first, with the hope either of opposing, or at least of softening, the tyranny: but he presently perceived, that the evil had no remedy, and that to share in the public affairs, it was necessary either to render himself an accomplice of their crimes, or the victim of their appetites. He therefore waited a more favourable occasion. That time (A. M. 3602, Ant. J. C. 402,) seemed soon after to be arrived. The tyrants were expelled, and the form of the government entirely changed. But the affairs of the public were in no better a condition, and the state received new wounds every day. Socrates himself was sacrificed to the malice of his enemies. Plato retired to the house of Euclid at Megara, whence he went to Cyrene, to cultivate the mathematics under Theodorus, the greatest mathematician of his time. He afterwards visited Egypt, and conversed a great while with the Egyptian priests, who taught him great part of their traditions. It is even believed, that they made him acquainted with the books of Moses, and the prophets. Not content with all these acquisitions, he went to that part of Italy called Græcia Magna, to hear the three most famous Pythagoreans of those times, Philolaus, Archytas of Tarentum, and Eurytus. Thence he went into Sicily, to see the wonders of that island, and especially the volcano of mount Ætna. This voyage, which was a mere effect of his curiosity, laid the first foundations of the liberty of Syracuse, as I have explained at large in the history of Dionysius, the father and son, and in that of Dion. He intended to have gone to Persia, in order to have consulted the Magi: but was pre-

vented by the wars, which at that time troubled Asia. At his return to his country after all his travels, in which he had acquired much curious knowledge, he settled his abode in the quarter of the suburb of Athens called the Academy, (of which we have spoken above) where he gave his lessons, and formed so many illustrious disciples.

Plato composed a system of doctrine from the opinions of three philosophers. He followed Heraclitus in natural and sensible things: that is to say, he believed with Heraclitus, that there was but one world; that all things were produced by their contraries; that motion, which he calls war, occasions the production of beings, and rest their dissolution. He followed Pythagoras in intellectual truths, or what we call metaphysics: that is to say, he taught as that philosopher did, that there is but one God, the author of all things; that the soul is immortal; that men have only to take pains to purge themselves of their passions and vices, in order to be united to God; that after this life there is a reward for the good, and a punishment for the wicked; that between God and man there are various orders of spirits, which are the ministers of the Supreme Being. He had also taken the Metempsychosis from Pythagoras, but given it a construction of his own. And finally he imitated Socrates in respect to morality and politics; that is to say, he reduced every thing to the manners, and laboured only to incline all men to discharge the duties of the situation of life, in which the Divine Providence has placed them. He also very much improved logic, or, which is the same thing, the art of reasoning with order and exactness.

All the works of Plato, except his letters, of which only twelve have come down to us, are in the form of dialogues. He purposely chose that manner of writing, as more agreeable, familiar, comprehensive, and better adapted to instruct and persuade, than any other. By the help of it he succeeded wonderfully in placing truths in their full light. He gives to each of his speakers his proper character; and by an admirable chain of reasons, which necessarily induce each other, he leads them on to admit, or rather to say themselves, all he would prove to them.*

As to the style, it is impossible to imagine any thing greater, more noble, or more majestic; that, says Quintilian, he seems not to speak the language of men, but of the gods.² The flow and numbers of his elocution form a harmony scarce

2 In dialogis Socraticorum, maximeque Platonis, adeo scitæ sunt interrogationes, ut, cum plerique bene respondentur, res tandem ad id quod voluit efficere, perveniat. *Quintil.* l. v. c. 7.

3 Ut mihi, non hominis ingenio, sed quodam Delphico videatur oraculo instinctus. *Quintil.* l. x. c. 1.

inferior to that of Homer's poetry; and the Atticism, which, among the Greeks, was in point of style whatever was finest, most delicate, and most perfect in every kind, prevails in it universally, and shows itself everywhere in a manner entirely peculiar. But neither the beauty of style, the elegance and happiness of expressions, nor the harmony of numbers, constitute the value of Plato's writings. What is most to be admired in them, is the solidity and greatness of the sentiments, maxims, and principles diffused throughout them, whether for the conduct of life, policy, government, or religion. I shall cite some passages from them in the sequel.

Plato died in the first year of the 108th Olympiad, (A. M. 3656, Ant. J. C. 348,) which was the thirteenth of the reign of Philip of Macedon, aged eighty-one, and upon the same day in which he was born.

He had many disciples, of whom the most distinguished were Speusippus his nephew by the mother's side, Xenocrates of Chalcedon, and the celebrated Aristotle. Theophrastus is also said to have been of the number of his hearers, and Demosthenes to have always considered him as his master; of which his style is a good proof. Dion, the brother-in-law of Dionysius the tyrant, also did him great honour by his excellent character, his inviolable attachment to his person, his extraordinary taste for philosophy, the rare qualities of his head and heart, and his great and heroic actions for re-establishing the liberty of his country.

After the death of Plato, his disciples divided themselves into two sects.¹ The first continued to teach in the Academy, the name of which they retained. The others settled their school in the Lyceum, a place in Athens adorned with porticos and gardens. They were called Peripatetics, and had Aristotle for their founder. These two sects differed only in name, and agreed as to opinions. They had both renounced the custom and maxim of Socrates, which was to affirm nothing, and to explain themselves in disputes only dubiously and with reserve. I shall speak of the Peripatetics in the sequel, when I have briefly related the history of the philosophers who fixed their residence in the Academy.

SPEUSIPPUS.

I have already said that he was Plato's nephew.² His conduct was so very irregular in his youth, that his parents turned him out of their house. That of his uncle became his asylum. Plato behaved to him as if he had

never heard of his debauched life. His friends were shocked and amazed at his placing his kindness on one so undeserving, and blamed him for taking no pains to correct his nephew, and reform his dissolute manners. He replied calmly, that he laboured more effectually to that purpose than they imagined, in showing him by his own manner of living the infinite difference between virtue and vice, and between decency and depravity. And indeed that method succeeded so well, that it inspired Speusippus with a very great respect for him, and a violent desire of imitating him, and of devoting himself to philosophy, in the study of which he afterwards made very great proficiency. It requires no common address to manage the spirit of a vicious young man, and to bring him over to a sense of his duty. The boiling heat of youth seldom gives way to violence, which often serves only to inflame and precipitate it into despair.

Plato had cultivated a particular intimacy between Speusippus and Dion, with the view of softening the austere temper of the latter, by the gaiety and insinuating manners of his nephew.

He succeeded his uncle in the school after his death, but held it only eight years; after which his infirmities obliged him to resign it to Xenocrates. Speusippus did not depart from Plato's doctrine, but was not studious to imitate him in his practice. He was choleric, loved pleasure, and seemed self-interested; for he exacted a premium from his disciples, contrary to the custom and principles of Plato.

XENOCRATES.

Xenocrates was of Chalcedon, and became very early Plato's disciple. He studied under that great master at the same time as Aristotle, but not with the same talents. He had occasion for a spur, and the other for a bridle;³ which are Plato's own words of them, who added, that in putting them together, he coupled a horse with an ass. He is praised for not being discouraged by the slowness of his parts, which made study much more laborious to him than to others. Plutarch⁴ uses the example of him, and that of Cleanthes, to encourage such as perceive they have less penetration and vivacity than others, and exhorts them to imitate these two great philosophers, and like them, to set themselves above the ridicule of their companions. If Xenocrates, from the heaviness of his genius, was inferior to Aristotle, he far surpassed him in practical philosophy and purity of manners.

He was naturally melancholy, and had some

³ Isocrates said the same thing of Theopompus and Euthorus.

⁴ Plut. de audit. p. 47.

¹ Cic. Acad. Quæst. l. i. n. 17—18.

² Laert.

thing stiff and austere in his temper; ⁵ for which reason Plato often advised him "to sacrifice to the Graces," signifying clearly enough by those words, that it was necessary for him to soften the severity of his temper. ⁶ He sometimes reproved him for that fault with more force, and less reserve, apprehending that his pupil's want of politeness and good-nature would become an obstacle to all the good effects of his instruction and example. Xenocrates was not insensible to these reproaches: but they never diminished the profound respect he always had for his master. And when endeavours were used to make him angry with Plato, and he was provoked to defend himself with some vivacity, he stopped the mouths of his indiscreet friends with saying, "He uses me so for my good." He took Plato's place in the second year of the 110th Olympiad, A. M. 3666.

Diogenes Laertius ⁷ says, that he loved neither pleasure, riches, nor praise. He showed on many occasions a generous and noble disinterestedness. The court of Macedonia had the reputation of retaining a great number of pensioners and spies in all the neighbouring republics, and to corrupt with bribes all persons sent to negotiate with them. Xenocrates was deputed with some other Athenians to Philip. That prince, who perfectly understood the art of insinuating into people's favour, applied himself in a particular manner to Xenocrates, whose merit and reputation he was apprized of. When he found him inaccessible to presents and interest, he endeavoured to mortify him by an affected contempt, and ill treatment, not admitting him to his conferences with the other ambassadors from the commonwealth of Athens, whom he had corrupted by his caresses, feasts, and liberalities. Our philosopher, firm and unalterable in his principles, retained all his stiffness and integrity, and though wholly excluded, continued perfectly easy, and never appeared either at audiences or feasts as his colleagues did. At their return to Athens, his colleagues endeavoured in concert to discredit him with the people, and complained, that he had been of no manner of use to them in this embassy; in consequence of which he was very near having a fine laid on him. Xenocrates, forced by the injustice of his accusers to break silence, explained all that had passed in Philip's court, made the people sensible of what importance it was to have a strict eye upon the conduct of deputies who had sold themselves to the enemy of the commonwealth, covered his colleagues with shame and confusion, and acquired immortal glory. His disinterestedness was also

put to the proof by Alexander the Great. ⁸ The ambassadors of that prince, who, without doubt, came to Athens upon account of some negotiation, (neither the time nor the affair are said) offered Xenocrates from their master fifty talents, or fifty thousand crowns. Xenocrates invited them to supper. The entertainment was simple, frugal, plain, and truly philosophical. The next day the deputies asked him, into whose hands they should pay the money they had orders to give him. ⁹ "How!" said he to them, "did not my feast yesterday inform you, that I have no occasion for money?" He added that Alexander was more in want of it than he, because he had more mouths to feed. Seeing that his answer made them sad, he accepted of thirty minæ (about seventy-five pounds) that he might not seem to despise the king's liberality out of pride. Thus, says an historian, in concluding his account of this fact, the king would have purchased the friendship of the philosopher, and the philosopher would not sell it to the king. ¹⁰

His disinterestedness must have reduced him to great poverty, as he could not discharge a certain tax, which strangers were obliged to pay yearly into the public treasury of Athens. Plutarch ¹¹ tells us, that one day, as they were halting him to prison for not having paid this tribute, the orator Lycurgus discharged the sum, and took him out of the hands of the farmers of the revenue, who frequently are not too sensible of the merit of the learned. Xenocrates some days after meeting the son of his deliverer, told him; "I pay your father the favour he did me with interest; for all the world praises him upon my account." Diogenes Laertius ¹² tells us something very like this of him, which perhaps is the same fact disguised under different circumstances. He says that the Athenians sold him, because he could not pay the capitation laid upon strangers: but that Demetrius Phalereus bought him, and immediately gave him his liberty. It is not very probable, that the Athenians should treat a philosopher of the reputation of Xenocrates with so much cruelty.

Athens had a very high idea of his probity. ¹³ One day when he appeared before the judges to give evidence in some affair, on his going towards the altar, in order to swear that what he had affirmed was true, all the judges rose up, and

⁸ Cic. Tusc. Quest. l. 5. n. 91. Val. Max. l. iv. c. 3.

⁹ Cùm postidie rogarent eum, cui numerari juberet: Quid! Vos hesternâ, inquit, cenulâ non intellexistis, me pecunia non cingere? Quos eam tristiores vidisset, triginta minas accepit, ne aspernari regis liberalitatem videretur. Cic.

¹⁰ Ita rex philosophi amicitiam emere voluit: philosophus regi suam vendere noluit. Val. Max.

¹¹ Plut. in Flamin. p. 375. ¹² Diog. Laert. in Xenoc.

¹³ Cic. Orat. pro. Com. Balb. n. 14. Val. Max. l. vi. c. 9.

⁵ Diog. Laert.

⁶ Elian. l. xiv. c. 9.

⁷ Diog. Laert.

would not suffer him to do so, declaring that his word was as satisfactory to them as an oath.

Happening in company, where abundance of scandal was talked, he did not share in it, and continued mute. Upon being asked by somebody the reason of his profound silence, he replied: "It is because I have often repented of speaking, but never of holding my tongue."

He had a very fine maxim upon the education of youth, which it were to be wished parents would cause to be observed in their houses. 'He was, from their earliest infancy, for having wise and virtuous discourses often repeated in their presence; but without affectation; in order that they might seize in a manner their ears, as a place hitherto unoccupied, through which virtue and vice might equally penetrate to the heart; and that these wise and virtuous discourses, like faithful sentinels, should keep the entrance firmly closed against all words that might corrupt the purity of manners in the least, till by long habit youth were become strong, and their ears safe against the envenomed breath of bad conversation.'

According to Xenocrates, there are no true philosophers but those who do that voluntarily and of their own accord, which others do only through fear of punishment and the laws.⁴

He composed several works, among the rest one upon the method of reigning well; at least Alexander asked it of him.⁵

He lost little time in visits, was very fond of the retirement of his study, and meditated much. He seldom was seen in the streets: but when he appeared there, the debauched youth used to fly to avoid meeting him.

A young Athenian, more vicious than the rest, and absolutely infamous for his irregularities in which he gloried, was not so much awed by him.⁶ His name was Polemon. After a debauch, passing by the school of Xenocrates, and finding the door open, he went in, full of wine sweet with essence, and with a wreath on his head. In this condition he took his seat among the auditors, less to hear than out of insolence. The whole assembly were strangely surprised and offended. Xenocrates, without the least

emotion or change of countenance, only varied the discourse, and went on with speaking upon temperance and sobriety, all the advantages of which he set in full light, by opposing to those virtues the shame and turpitude of the contrary vices. The young libertine, who listened with attention, opened his eyes to the deformity of his condition, and was ashamed of himself. The wreath falls from his head; with downcast eyes he hides himself in his cloak, and instead of that gay insolence which he had shown on entering the school, he appears serious and thoughtful.⁷ An entire change of conduct ensued; and absolutely cured of his bad passions by a single discourse, from an infamous debauchee, he became an excellent philosopher, and made a happy amends for the vices of his youth by a wise and regular course of life, from which he never departed.

Xenocrates died at the age of eighty-two, A. M. 3688, Ant. J. C. 316, in the first year of the 116th Olympiad.

POLEMON. CRATES. CRANTOR.

I join these three philosophers under the same title, because little is known of their lives.

Polemon worthily succeeded his master Xenocrates, and never departed from his opinions, nor the example of wisdom and sobriety, which he had set him. He renounced wine in such a manner at the age of thirty, which was the time his celebrated change of conduct began, that during the rest of his life he never drank any thing but water.⁸

Crates, who was his successor, is little known, and must be distinguished from a cynic philosopher of the same name, of whom we shall speak in the sequel.

Crantor was more famous. He was of Seli in Cilicia. He quitted his native country, and came to Athens, where he was the disciple of Xenocrates at the same time with Polemon. He passes for one of the great pillars of the Platonic sect.⁹ What Horace says of him in praising Homer, argues the great reputation of this philosopher, and how much his principles of morality were in esteem:

Qui quid sit pulchrum, quid turpe, quid utile, quid non,
Pleinius ac melius Chrysippo et Crantore dicit.

Hor. Ep. ii. l. 1.

Who tells what's great, what mean, what fit, what not,
Better than Crantor or Chrysippus taught.

7 ———— Faciasne quod olim
Mutatus Polemon? Ponas insignia morbi,
Fasciolas, cubital, fœcilia? potus ut ille
Dicitur ex collo furtim carpsisse coronas,
Postquam est impræparat correptus vocæ magistri.

Hor. Sat. iii. l. 3.

8 Athen. l. ii. p. 44.

9 Crantor ille qui in nostra academia vel in primis fuit nobilis. Cic. Tus. Quest. l. iii. n. 12.

1 Plut. de. aud. p. 38.

2 Τῶν λόγων τοῦ φαίλου φαλάτῃσι περιένειται χρονοῖς, ὥστε φίλακας, ὑπερβίοντας καὶ φιλοσοφίας, τῷ ἴθι τῇ μάλιστα κινουμένῃ αὐτοῦ καὶ ἀναστυβαίνῃ χάριτι παρῶν.

3 He alludes to the Athletæ, who in boxing used to cover their heads and ears with a kind of leathern cap, to deaden the violence of the blows. He says that this precaution is much more necessary to youth. For all the risk the Athletæ ran was of having their ears hurt; whereas young persons hazard their innocence, and even the loss of themselves.

4 Plut. de virt. moral. p. 446.

5 Diog. Laert.

6 Diog. Laert. Val. Max. l. vi. c. 90.

The same cannot be said of his principles upon the nature of the soul, as we shall see in its place.

He wrote a book upon *Consolation*,¹⁰ which is lost: it was addressed to Hippocles, whom an early death had deprived of all his children. It is mentioned as a book of gold, of which every word deserved to be got by heart.¹¹ Cicero had made great use of it in a tract that bore the same title. Arcesilaus the author of the middle Academy was his disciple.

SECT. II.

Of the Middle Academy.

It is so called, because it flourished between the ancient Academy instituted by Plato, and the new that soon succeeded it, of which Carneades was the author.

ARCESILAUS.

Arcesilaus was born at Pitane in Æolia.¹² He went to Athens and became the disciple of the greatest philosophers, of which number were Polemon, Theophrastus, Crantor, Diodorus, and Pyrrho.¹³ It was evidently of the last that he learned to doubt every thing. He was only an academic by name, which he retained out of respect to Crantor, upon being whose disciple he valued himself. He succeeded Crates, or according to others, Polemon, as professor in the Platonic school, in which he became an innovator.¹⁴ For he founded a sect, which was called the second or middle Academy, to distinguish it from that of Plato. He was very opposite to the Dogmatists, or the philosophers who affirmed and decided. He seemed to doubt all things; maintained both sides of a question, and determined nothing. He had a great number of disciples. To attack all the sciences, and to reject not only the evidence of the senses, but of reason, was certainly the boldest undertaking that could be formed in the republic of letters. To hope any success in it, required all the merit of Arcesilaus. He was by nature of a happy, ready, warm genius: his person was very graceful, and his manner of speaking happy and delightful.¹⁵ The beauty of his aspect admirably seconded the charms of his utterance. Accordingly Lucullus, who learnedly and solidly

refutes the opinion of the Academics, says that nobody would have followed the opinion of Arcesilaus, if the eloquence and address of the teacher had not covered, and made the manifest absurdity of his doctrine disappear.¹⁶

Things much for his honour are related of his liberality. He delighted in doing good, and was not willing that it should be known.¹⁷ Visiting a friend¹⁸ who was sick, and wanted necessities, but was ashamed to own it, he dexterously slid a purse full of money under his pillow, to spare his shame and delicacy, and that he might seem rather to have found than accepted it.¹⁹ Authors do not give so favourable a testimony of the purity of his manners, and accuse him of the most infamous vices.²⁰ And that ought not to appear strange in a philosopher, who, doubting every thing, doubted, in consequence, the existence of virtue and vice, and could not really admit any rule in respect to the duties of civil life. He did not care to have any part in the public affairs.²¹ However, having been chosen to go to Demetrias in order to negotiate for his country with Antigonus, he accepted the deputation, but returned without success. In the torments of the gout, he affected the patience and insensibility of a Stoic.²² "Nothing from these has reached this," said he, pointing to his feet and touching his breast,²³ to Carneades the Epicurean, who was much concerned to see him suffer in that manner. He was for making the other believe, that his soul was inaccessible to pain. Lofty language, with nothing real in it but pride!

Arcesilaus flourished about the 120th Olympiad, that is, about the year of the world 3704.²⁴ He died of excessive drinking, which had made him delirious, at the age of 75.

His successors were Lacydes, Evander, and Egæsimus, which last was the master of Carneades.²⁵

16 Quis ista, tam apertè perspicuè et perversa et falsa, secutus esset, nisi tanta in Arcesila—et copia rerum, et dicendi vis fuisset? *Ibid.* n. 60.

17 Ἐπισκεπόμενος φίλον ἔχοντα, καὶ λαβὼν τὴν χάριν ἀπορίσκατος. *Diog. Laert.*

18 Seneca calls him Ctesibius: Plutarch gives him another name. *De discrim. amic. et adulat.* p. 63.

19 Arcesilaus ut aiunt, amico pauperi, et paupertatem suam dissimulanti, ægro autem, et ne hoc quidem contenti deesse sibi in sumptum ad necessarios usus, cum clam succurrendum judicasset, pulvino ejus ignorantis sacculum subjecti, ut homo inutiliter verecundus, quod desiderabat, inveniret potius quam acciperet. *Senec. de Benef.* l. II.

20 *Diog. Laert.*

21 *Idem.*

22 Is cum arderet et podagræ doloribus, visitassetque hominem Carneades Epicuri per familiaris, et tristis exiret: mane, quæso, inquit, Carneade noster. Nihil illinc huc pervenit, ostendens pedes et pectus. *De Finib.* l. v. n. 94.

23 The ancients believed the breast the seat of the soul and of courage.

24 *Diog. Laert.*

25 *Acad. Quest.* l. iv. n. 14.

3 f

10 Plut. de Consol. p. 104.

11 Legimus omnes Crantoris, veteris Academici, de luctu: est enim non magnus, verum aureolus, et, ut Tuberoni Panætius præcipit, ad verbum ediscendus libellus. *Acad. Quest.* l. iv. n. 135.

12 *Diog. Laert.* in Arcesil.

13 Num. apud Euseb. Præp. Evang. l. xiv. c. 5.

14 *Diog. Laert.*

15 Arcesilas floruit, tum æcumine ingenii, tum admirabili quodam lepore dicendi. *Academ. Quest.* l. iv. n. 10.

SECT. III.

Of the New Academy.

CARNEADES.

Carnades of Cyrene instituted the third or new Academy, which, properly speaking, did not differ from the second. For, except some few palliatives, Carnades was as warm and zealous an advocate for uncertainty as Arcesilaus. The difference between them, and the innovation ascribed to him of whom we now speak, consist in his not denying with Arcesilaus, that there are truths; but he maintained that they were compounded with so many obscurities, or rather falsehoods, that it was not in our power to discern with certainty the true from the false.¹ He went therefore so far as to admit that there were probable things, and agreed that probability might determine us to act, provided we did not pronounce absolutely upon any thing. Thus he seems to have retained at bottom the whole doctrine of Arcesilaus, but out of policy, and to deprive his opponents of the more specious pretexts for declaiming against, and ridiculing him, he granted degrees of probability, which ought to determine the wise man to choose this or that in the conduct of civil life. He saw plainly, that without these concessions he should never be able to answer the strongest objections to his principle, nor to prove that it did not reduce man to inaction.

Carnades was the declared antagonist of the Stoics, and applied himself with extreme ardour to refute the works of Chrysippus, who had been for some time the support of the Porch. He so ardently desired to overcome him, that in preparing for the dispute he took hellebore, in order to have his mind the more free, and to give the fire of his imagination the greater force against him.²

A maxim of morality, very admirable in a pagan, is ascribed to him. "If a person knew," says he, "that an enemy, or another whose death would be for his advantage, would come to sit down upon the grass where an asp lurked, it would be acting dishonestly not to give him notice of it, even though his silence might pass with impunity, nobody being capable of making

a crime of it." But the conduct of these pagans was always inconsistent with itself in some part or other. This grave philosopher was not ashamed of keeping a concubine in the house with him.

Plutarch has preserved a pretty reflection of Carnades,³ in his treatise upon the difference between a friend and a flatterer. He had cited the example of one, who, in disputing the prize in the horserace with Alexander, had suffered himself to be beat designedly, for which that prince was very angry with him: he adds, "That the manage is the only thing, in which young princes have nothing to apprehend from flattery. Their other masters frequently enough ascribe good qualities to them, which they have not. But a horse, without regard to rich or poor, to subject or sovereign, throws all the awkward riders that back him."

The embassy of Carnades to Rome is much celebrated: I have spoken of it elsewhere.

To conclude what relates to Carnades, I shall observe that he had not entirely neglected Physics, but that he had made Ethics his principal study. He was extremely laborious, and so avaricious of his time, that he took no cure either to pare his nails or cut his hair.⁴ Solely devoted to meditation, he not only avoided feasts, but even forgot to eat at his own table, so that his servant, who was also his concubine, was obliged to put meat into his hand, and almost into his mouth. He was extremely afraid of dying.⁵ However, upon being informed that his antagonist Antipater, the Stoic philosopher, had poisoned himself, he assumed a short sally of courage against death, and cried out: "Then give me also!"—"What?" asked somebody. "Mulled wine," replied he, having betthought himself better of it. Diogenes Laertius ridicules this pusillanimity, and reproaches him with having chosen rather to languish long of the phthisic, than to give himself death: for that the pagans thought glorious, though the wisest among them were of a different opinion, "and believed, that nature was the tacit law of God." He died in the fourth year of the 163d Olympiad, A. M. 3871, Ant. J. C. 133, aged eighty-five years.

CLITOMACHUS.

Clitomachus, the disciple of Carnades, was his successor.⁶ He was a Carthaginian, and called Asdrubal in the Punic tongue. He composed several books, which were highly esteemed, and of which one was entitled, *Consolation*. He

1 Non sumus ii quibus nihil verum esse videtur, sed ii qui omnibus veris falsas quaedam adjuncta esse dicamus, tanta similitudine, ut in iis nulla insit certa iudicandi et assentiendi nota. Ex quo existit et illud, multa esse probabilia; quæ quanquam non perciperentur, tamen, quia visum habent quendam insignem et illustrem, his sapientis vita regeatur. *De nat. deor.* l. i. n. 12.

² Val. Max. l. viii. c. 7.

³ Cic. de finib. l. ii. n. 59.

⁴ Page 58. ⁵ Diog. Laert. Val. Max. l. viii. c. 2.

⁶ Diog. Laert.

⁷ Plut. de fort. Alex. p. 328. Cic. l. iii. Tuscul. Quest. n. 54.

addressed it to his countrymen after the taking and destruction of Carthage, to console them under the state of captivity into which they were fallen.

PHILO. ANTIOCHUS.

Philo succeeded his master Clitomachus.⁹ He taught both philosophy and rhetoric, but at different times. Cicero frequented his school, and improved from his double lectures. He was also the hearer of Antiochus, Philo's disciple and successor.

Antiochus was of Ascalon, and is the last of the Academic philosophers mentioned in history. Cicero in his voyage to Athens was charmed with his calm, flowing, graceful manner of speaking;¹⁰ but he did not approve of the change he had introduced in the method of Carneades. For Antiochus, after having long and strenuously maintained the opinions of the new Academy, which rejected entirely the evidence of the senses, and even of reason, and taught that there was nothing certain, had on a sudden embraced those of the old Academy; either from being undeceived by the conviction of reason and the report of his senses; or, as some believed, from jealousy and envy for the disciples of Clitomachus and Philo.

Lucullus,¹¹ the famous Roman, as well known for his wonderful taste for the sciences as his great ability in war, had declared openly for the sect of the Academics, not of the new Academy, though then very flourishing from the writings of Carneades which Philo explained, but for that of the old Academy, of which the school was held at that time by Antiochus. He had cultivated the friendship of that philosopher with extreme ardour: he gave him an apartment in his own house, and made use of his assistance in opposing the disciples of Philo, of whom Cicero was the chief.

ARTICLE V.

Of the Peripatetics.

ARISTOTLE.

I have already observed, that after Plato's death, his disciples divided themselves into two sects: of which the one continued in the school where Plato had taught, and the other removed to the Lycæum, an agreeable place in the suburbs of Athens. Aristotle was the chief and founder of the latter. He was a native of Stagira, a city of Macedonia, and was born in the first year of

the 99th Olympiad, A. M. 3620, forty years after Plato.¹² His father Nicomachus was a physician, and flourished in the reign of Amyntas king of Macedonia, Philip's father. At the age of seventeen he went to Athens, and entered himself in the school of Plato, under whom he studied twenty years. He was its greatest honour, and Plato used to call him the soul of his school. His passion for study was so great, that in order to prevent sleep from engrossing him, he placed a basin of brass by his bed-side, and when he lay down, extended one of his hands out of bed with an iron ball in it, that the noise made by the falling of the ball into the basin, when he fell asleep, might immediately waken him.

After Plato's death, which happened in the first year of the 108th Olympiad, A. M. 3636, he retired to the house of Hermias tyrant of Atarneus in Mysia, his fellow-pupil, who received him with joy, and loaded him with honours. Hermias having been condemned and put to death by the king of Persia, Aristotle married his sister Pithias, who was left without fortune or protector. It was at this time, Philip chose him, to take care of the education of his son Alexander, who might then be about fourteen or fifteen years old. He had long before designed him that important and glorious employment.¹³ As soon as his son came into the world, he informed him of his birth by a letter, which does Philip no less honour than Aristotle, and which I am not afraid to repeat in this place. "You have this," says he, "to inform you, that I have a son. I thank the gods, not so much for having given him to me, as for having given him to me in the time of Aristotle. It is with reason I assure myself, that you will make him a successor worthy of us, and a king worthy of Macedonia." Quintilian¹⁴ says expressly, that Aristotle taught Alexander the first rudiments of grammar. But as that opinion admits of some difficulty, I do not entirely give into it. When the time for taking upon him the education of that prince arrived, Aristotle repaired to Macedonia. We have seen elsewhere the high value, which Philip and Alexander expressed for his extraordinary merit.

After a residence of some years in that court, he obtained permission to retire. Callisthenes, who had accompanied him thither, took his place, and was appointed to follow Alexander

11 Diog. Laert.

12 Aul. Gell. l. ix. c. 3.

13 An Philippus Macedonum rex Alexandro filio suo prima literarum elementa tradi ab Aristotele summo ejus ætatis Philosopho voluisset, aut ille suscepisset hoc officium, si non studiorum initia à perfectissimo quoque tractari, pertinere ad summam credidisset? *Quæst. l. i. c. i.*

9 Tusc. Quæst. l. ii. n. 9.

9 Plut. in Cic. p. 802.

10 Plut. in Lucull. pp. 519, 520.

into the field. Aristotle,¹ in whom profound judgment and a great knowledge of the world were united, upon the point of setting sail for Athens, advised Callisthenes not to forget one maxim of Xenophanes, which he judged absolutely necessary to persons who live in courts: "Speak seldom to the prince, or speak so as to please him: that your silence may either make you more secure, or your discourse more agreeable to him." Callisthenes, who was naturally morose and austere, made but ill use of this counsel, which indeed at bottom savours more of the courtier than the philosopher.

Aristotle, then, not having thought proper to follow his pupil to the war, to which his attachment to study made him very averse, after Alexander's departure returned to Athens. He was received there with all the marks of distinction due to a philosopher that excelled in so many respects. Xenocrates at that time presided in Plato's school in the Academy: Aristotle opened his in the Lyceum. The concourse of his hearers was extraordinary. In the morning his lessons were upon philosophy, and in the afternoon upon rhetoric: he usually gave them walking, which occasioned his disciples to be called Peripatetics. He taught only philosophy at first: but the great reputation of Isocrates, then ninety years old, who had applied himself solely to rhetoric, and with incredible success, excited his jealousy and induced him also to teach it.² It is perhaps to this noble emulation, allowable between the learned, when confined to imitating, or even surpassing what others have done well, that we owe Aristotle's Rhetoric, the most complete and most esteemed work the ancients have left us upon that subject; unless we choose rather to believe it composed for Alexander.

So shining a merit as Aristotle's did not fail to excite envy, which seldom spares great men. As long as Alexander lived, that conqueror's name suspended the effects of it, and awed the malignity of his enemies. But he was no sooner dead, than they rose up in concert against him, and swore his destruction. Eurymedon, priest of Ceres, lent them his assistance, and served their hatred with a zeal the more to be feared, as it was covered with the mask of religion. He cited Aristotle before the judges, and accused him of impiety, pretending that he taught doctrines contrary to the worship of the gods established at Athens. To prove this, he referred to Aristotle's hymn in honour of

Hermias, and the inscription engraved upon his statue in the temple of Delphos. This inscription is still extant in Athenæus and Diogenes Laërtius. It consists of four verses, which have no relation to sacred matters, but only to the king of Persia's perfidy to the unfortunate friend of Aristotle: neither is the hymn more criminal. Aristotle might perhaps have offended Eurymedon the priest of Ceres personally by some stroke of ridicule, a much more unpardonable crime than only attacking the gods. However this may be, not believing it safe to wait the event of a trial, he quitted Athens, after having taught there thirteen years. He retired to Chalcis in the Island of Eubœa, and pled his cause from that place in writing. Athenæus³ repeats some expressions in this apology, but does not warrant them positively to be Aristotle's. Somebody asking him the cause of his retiring, he answered, "that it was to prevent the Athenians from committing a second murder upon philosophy," alluding to the death of Socrates.⁴

It is pretended that he died of grief, because he could not discover the cause of the ebbing and flowing of the Euripus, and that he even threw himself headlong into that sea, saying, "Let the Euripus swallow me, since I cannot comprehend it." There were a multitude of other things in nature beyond his comprehension, and he was too wise to be mortified on that account. Others⁵ affirm, with more probability, that he died of the colic in the 63d year of his age, A. M. 3683, two years after Alexander's death. He was extremely honoured in Stagira the place of his nativity. It had been demolished by Philip king of Macedonia: but Alexander caused it to be rebuilt at the request of Aristotle.⁶ The inhabitants in gratitude for that benefit instituted a festival in honour of this philosopher, and when he died at Chalcis in Eubœa, transported his bones to their city, erected an altar upon his monument, gave the place the name of Aristotle, and afterwards held their assemblies in it. He left a son called Nicomachus, and a daughter who was married to a grandson of Demaratus king of Sparta.

I have related elsewhere the fate of his works, during how many years they remained buried and unknown, and in what manner they were at length brought to light and made public.

Quintillian⁷ says, that he does not know which to admire most in Aristotle, his vast and profound erudition, the prodigious multitude of the writings which he left behind him, the beauty of his style, or the infinite variety of his works. One would believe, says he in another

1 Aristoteles, Callisthenem auditorem suum ad Alexandrum dimittens, monuit ut cum eo aut rarissime, aut quàm jucundissime loqueretur: quo scilicet apud regias aures vel silentio tutior, vel sermone esset acceptior. *Fal. Max.* l. vii. c. 2.

2 Cic. l. iiii. de Orat. n. 111. Quintil. l. iiii. c. 1.

3 Athen. l. xv. pp. 606, 607.

5 Laert.

4 *Ælian.* l. iiii. c. 36.

6 *Ammon.* in vit. Aristot.

7 *Lib.* x. c. 1.

place, that he must have employed several ages in study, for comprehending within the extent of his knowledge all that regards not only philosophy and rhetoric, but even plants and animals, whose nature and properties he studied with infinite application.⁸ Alexander, to second his master's ardour in that learned labour,⁹ and to satisfy his own curiosity, gave orders for making exact inquiries throughout the whole extent of Greece and Asia into all that related to birds, fish, and animals of every kind: an expense which amounted to above eight hundred talents, or eight hundred thousand crowns.¹⁰ Aristotle composed above fifty volumes upon this subject, of which only ten remain.

The university of Paris has thought very differently at different times of Aristotle's writings. In the council of Sens held at Paris in 1209, all his books were ordered to be burned, and the reading, writing, or keeping them prohibited. The rigour of this prohibition was afterwards somewhat abated. At length, by a decree of the two cardinals sent by pope Urban V. to Paris, in the year 1366, to regulate the university, all the books of Aristotle were allowed there; and that decree was renewed and confirmed in 1452, by cardinal Etouteville. From that time Aristotle's doctrine always prevailed in the university of Paris, till the happy discoveries of the last age opened the eyes of the learned, and made them embrace a system of philosophy highly different from the ancient opinions of the schools. But as Aristotle was formerly admired beyond due bounds, he is perhaps despised at present more than he deserves.

Aristotle's Successors.

Theophrastus was of the Island of Lesbos. Aristotle before he retired to Chalcis, appointed him his successor.¹¹ Accordingly he filled the place of his master with so much success and reputation, that the number of his hearers amounted to two thousand. Demetrius Phalereus was one of his disciples and intimate friends. The beauty and delicacy of his eloquence occasioned his being called Theophrastus, which signifies "divine speaker."

Cicero relates a circumstance particular enough of him.¹² He was cheapening something of an

herb-woman, and was answered by her: "No, Mr. Stranger, you shall have it for no less." He was extremely surprised and even concerned, that after having passed great part of his life at Athens, the language of which he piqued himself upon speaking in perfection, he could however still be discovered for a stranger. But it was his attention itself to the purity of the Attic dialect carried too far, that occasioned his being known for such, as Quintillian observes. What a taste had Athens even down to the meanest of the people!

He did not believe, any more than Aristotle, that it was possible to enjoy any real felicity here without the goods and conveniences of life: in which, says Cicero,¹³ he degraded virtue, and deprived her of her highest glory; reducing her to an incapacity of making man happy of herself. He ascribes supreme divinity, in one place, to intelligence, in another to heaven in general; and after that, to the stars in particular.¹⁴

He died at the age of eighty-five, exhausted with labour and study. He is said to have murmured against nature at his death, for granting a long life to stags and ravens, who can make no beneficial use of it; whilst she abridged that of man, whom a longer date would enable to attain a perfect knowledge in the sciences:¹⁵ a murmur equally trifling and unjust, and which the light of reason only has taught many of the ancients to condemn, as a kind of rebellion against the divine will. *Quid enim est aliud gigantum more bellare cum diis, nisi naturæ repugnare?*¹⁶

Strato was of Lampsacus.¹⁷ He applied himself very much to physics, and little to ethics, which occasioned his being called the physician. He began to preside in his school in the third year of the 123d Olympiad, A. M. 3718, and taught there eighteen years. He was the master of Ptolemy Philadelphus.

Lycon of Troas. He governed his school forty years.

Ariston. Critolaus. The latter was one of the three ambassadors sent by the Athenians to Rome in the second year of the 140th Olympiad, A. M. 3781, and the 534th of Rome.

Diodorus. This was one of the last eminent philosophers of the sect of the Peripatetics.

⁸ Lib. xii. c. ult.

⁹ Plin. l. viii. c. 16. ¹⁰ Athen. l. ix. p. 608.

¹¹ Laert.

¹² Ut ego jam non mirer illud Theophrasto accidisse quod dicitur, cum percontaretur ex ancilla quadam, quanti aliquid venderet? et responderet illa, atque addidisset: Horpes, non pote minoris: tulisse eum molestè, se non effugere hospitii speciem, cum ætatem ageret Athenis, optimeque loqueretur. In Brut. n. 172.

Quomodo et illa Attica anus Theophrastum, hominem

alloqui disertissimum, annotata unius affectatione verbi, hospitem dixit: nec aliò se id deprehendisse interrogata respondit, quàm quòd nimium Atticè loqueretur. Quintill. l. viii. c. 1.

¹³ Spoliavit virtutem suo decore, imbecillamque reddidit, quod negavit in ea sola positum esse beatè vivere. Acad. Quæst. l. i. n. 33.

¹⁴ Lib. i. de Nat. Deor. n. 35.

¹⁵ Tusc. Quæst. l. iii. n. 64. ¹⁶ Cic. de Senect. n. 5.

¹⁷ Laert.

ARTICLE VI.

Of the Sect of the Cynics.

ANTISTHENES.

The Cynic philosophers owe their origin and institution to Antisthenes the disciple of Socrates.¹ This sect derives its name from the place where its founder taught, called *Cynosarges*,² in the suburb of Athens. If this origin be true, at least, we cannot doubt but their immodesty and impudence might well have confirmed a name given them at first from the place. Antisthenes led a very hard life, and for his whole dress had only a wretched cloak. He had a long beard, a staff in his hand, and a wallet at his back. He reckoned nobility and riches as nothing, and made the supreme good of man consist in virtue. When he was asked of what use philosophy had been to him, he answered, "To enable me to live with myself."

DIOGENES.

Diogenes was the most celebrated of his disciples.³ He was of Synope, a city of Paphlagonia. He was expelled thence for counterfeiting the coin. His father, who was a banker, was banished for the same crime. Diogenes, upon arriving at Athens, went to Antisthenes, who treated him with great contempt, and would have driven him away with his staff, because he was resolved to have no more disciples. Diogenes was not surprised, and bowing his head, "Strike, strike," said he, "do not be afraid: you'll never find a stick hard enough to make me remove, so long as you speak." Antisthenes, overcome by the obstinacy of Diogenes, permitted him to be his disciple. Diogenes made great improvements from his lessons, and perfectly imitated his manner of living. His whole furniture consisted of a staff, a wallet, and a wooden bowl. Seeing a little boy drink out of the hollow of his hand: "He shows me," says he, "that I have still something superfluous," and broke his bowl. He always went barefoot, without ever wearing sandals, not even when the earth was covered with snow. A tub served him for a lodging, which he rolled before him wherever he went, and had no other habitation. Every body knows what he said to Alexander, who made him a visit at Corinth; and the celebrated saying of that prince, "If I were not Alexander, I would be Diogenes." Juvenal, accordingly, finds the inhabitant of the tub greater and more happy than the conqueror of the uni-

verse.⁴ The one desired nothing, and the whole world was too little for the other. Seneca therefore is not mistaken, when he says that Alexander, the proudest of mankind, who believed that every thing ought to tremble before him, was forced that day to submit to Diogenes, having found a man in him, from whom he could take, and to whom he could give, nothing.⁵ For the rest we are not to believe, that he was the more humble for his ragged cloak, bag, and tub. He had as much vanity in these things, as Alexander could have from the conquest of the whole earth.⁶—One day entering Plato's house, which was furnished magnificently enough, he trampled a fine carpet under his feet, saying, "I tread upon the pride of Plato." "Yes," replied the latter, "but with another kind of pride."—"He had a supreme contempt for all the human race. Walking at noon with a lighted lanthorn in his hand, somebody asked him what he sought? "I am seeking a man," replied he.—Upon seeing a slave put on a person's shoes: "You'll not be satisfied," says he, "till he wipes your nose for you. Of what use are your hands to you?" Another time seeing the judges carrying a man to be punished for stealing a little vial out of the public treasury: "See," said he, "the great thieves have caught a little one!"—The relations of a young man, whom they brought to him to be his disciple, said all the good things of him imaginable: that he was prudent, of good morals, and knew a great deal. Diogenes heard them very calmly: "As he is so accomplished," said he, "he has no occasion for me."

He was accused of speaking and thinking ill of the divinity.⁷ He said that the uninterrupted good fortune of Harpalus, who generally passed for a thief and a robber, was a testimony against the gods.

Among excellent maxims of morality, he held some very pernicious opinions. He regarded chastity and modesty as weakness, and was not afraid to act openly with an impudence contrary to all sense of decency and natural shame. And indeed the character of the Cynics was to overdo every thing in respect to manners, and to render virtue itself hateful if possible, by the excesses and inconsistencies to which they carried it.

Insani sapiens nomen ferat, equus iniqui,
Ultra, quam satis est, virtutem si petat ipsam.

Hor. Ep. vi. l. 1.

More than enough, in virtue's self is bad;
Just's then unjust; the wise man grows the mad.

4 Sensit Alexander, te ta cum vidit in illo
Magnum habitatorem, quanto felicius hic, qui
Nil cuperet, quam qui totum sibi posceret orbem.

5 Quidni victus sit illo die, qui homo, supra mensuram
humane superbiæ tumens, vidit aliquem cui nec dare
quidquam posset, nec eripere. *Senec. de Benef. l. v. c. 6.*

6 Elian. l. iii. c. 29.

7 Diog. Laert.

8 De Nat. deor. l. iii. n. 83.

1 Laert.

2 This word signifies a white, or a lively and swift dog.

3 Laert.

His historian ascribes to him most persuasive eloquence, of which he relates wonderful effects. Onesicritus had sent one of his sons to Athens. That young man having heard some of Diogenes's lectures, settled in that city.⁹ His elder brother soon after did the same. Onesicritus himself, having had the curiosity to hear that philosopher, became his disciple, such attractions had the eloquence of Diogenes. This Onesicritus was a person of importance. He was in great favour with Alexander, followed him in his wars, in which he had employments of distinction, and composed a history, that contained the beginning of Alexander's life.¹⁰ Phocion, still more illustrious than he, was also the disciple of Diogenes, as was Stilpon of Megara.

Diogenes in going to the Island of Egina was taken by pirates, who carried him to Crete, where they exposed him to sale. When he was asked by the crier, "What he could do?" he answered, "Command men," and bade him say, "Will any body buy a master?"¹¹ A Corinthian called Xenias bought him, and carried him to Corinth, where he made him preceptor to his sons. He confided also the whole care of his house to him. Diogenes acquitted himself so well of those employments, that Xenias was incessantly saying every where, "A good genius has taken up his abode in my house." The friends of Diogenes would have ransomed him: "No," said he, "that's foolish. Lions are not the slaves of those that feed them, but those that feed them their servants." He educated the children of Xenias very well, and acquired their affection to a great degree. He grew old in this house, and some say he died there.

He ordered at his death that his body should be left upon the earth without interment.¹² "How!" said his friends, "would you lie exposed to the birds and beasts?" "No," replied he, "put my stick by me, that I may drive them away." "And how will you do that," said they, "when you have no sense?" "What then does it signify," answered the Cynic, "whether I am eaten or not by the birds and beasts, as I shall have no sense of it?"

No regard was had to the great indifference of Diogenes about interment. He was buried magnificently near the gate next the Isthmus. A column was erected near his tomb, on which a dog of Parian marble was placed.

He died at nearly ninety years of age, according to some upon the same day as Alexander, but others make him survive that prince some years.

CRATES.

Crates the Cynic was one of the principal disciples of Diogenes.¹³ He was a Theban of a very considerable family, and of great fortune. He sold his whole patrimony for more than two hundred talents,¹⁴ which he put into the hands of a banker, and desired him to give them to his children in case they proved fools; but if they had elevation of mind enough to be philosophers, he directed him to distribute the money among the citizens of Thebes, because philosophers wanted nothing: always excess and caprice even in actions laudable in themselves.

Hipparchia, the sister of the orator Metrocles, charmed with the freedom of Crates's manners, was absolutely determined to marry him, notwithstanding the opposition of all her relations. Crates, to whom they applied themselves, did all he could on his side to make her disgust this marriage. Having stript himself before her to show her his hunch-back and ill-made body in the worst light, and throwing his cloak, bag, and staff, upon the ground; "There," says he, "are all my riches, and my wife must expect no other jointure from me." She persisted in her resolution, married hunchback, dressed herself like a Cynic, and became still more "free" and impudent than her husband.

Impudence was the prevailing character of these philosophers. They reproached others with their faults without any reserve, and even added an air of insolence and contempt to their reproaches. This, according to some, occasioned their being called Cynics, because they were biting, and barked at all the world like dogs; and because they were ashamed of nothing, and held that every thing might be done openly without shame or reserve.

Crates flourished at Thebes about the 113th Olympiad, A. M. 3676, and excelled all the Cynics of his time. He was the master of Zeno, the founder of the famous sect of the Stoics.

ARTICLE VII.

Of the Stoics.

ZENO.

Zeno was of Citium in the Island of Cyprus.¹⁵ On his return from buying purple in Phœnicia, for he applied himself first to commerce, he was cast away in the port of Pyreus. He was

⁹ Diog. Laert.

¹⁰ Plut. in. Alex. p. 701.

¹¹ Diog. Laert.

¹² Tusc. Quæst. l. I. n. 104.

¹³ Diog. Laert.

¹⁴ Two hundred thousand crowns.

¹⁵ Diog. Laert.

much afflicted with his loss, and removed to Athens, where he went into a bookseller's shop, and took up a book of Xenophon's, the reading of which gave him infinite pleasure, and made him forget his misfortune. He asked the bookseller, where that sort of people, of whom Xenophon spoke, were to be found. Crates the Cynic happened to pass by at that instant. The bookseller pointed him out to Zeno, and advised him to follow him. From that day he commenced his disciple; at which time he was thirty years of age, A. M. 3672. The morality of the Cynics highly pleased him, but he could not relish their immodesty and impudence.

After having studied ten years under Crates, and passed ten more in the houses of Stilpon of Megara, Xenocrates, and Polemon, he instituted a new sect at Athens, A. M. 3692. His reputation immediately spread throughout Greece. In a short time he became the most distinguished philosopher in the country. As he usually taught in a porch, his followers were called *Stoics*, from the Greek word *stoa*, which signifies a porch or portico.

Zeno lived to the age of ninety-eight, without ever experiencing any disorder of body.¹ He taught forty-eight years successively, and lived sixty-eight from his first applying to philosophy under Crates the Cynic. Eusebius dates his death, which was much regretted, at the 129th Olympiad, A. M. 3743. When Antigonus king of Macedonia received news of it, he was sensibly afflicted. The Athenians caused a tomb to be erected for him in the suburb of Ceramica, and by a public decree, (wherein he was praised as a philosopher who had perpetually excited the youth under his discipline to virtue, and who had always led a life conformable to the precepts he taught), they gave him a crown of gold, and caused extraordinary honours to be paid to his memory: "In order," says the decree, "that all the world may know, that the Athenians are studious to honour persons of distinguished merit, both during their lives and after their deaths." Nothing does a people more honour than such noble and generous sentiments, which arise from a high esteem for knowledge and virtue. I have already observed elsewhere that a neighbouring nation, I mean England, distinguishes itself by its esteem for great men of this kind, and by the gratitude it expresses for those who have exalted the glory of their country.

LEUCIPPUS.

Leucippus is one of the most famous of Zeno's disciples. Authors do not agree about

the place of his birth. He is believed to be the inventor of the atomical system. Posidonius ascribes it to one Moschus of Phœnicia, who, according to Strabo,² lived before the Trojan war: but the most learned persons give Leucippus the honour of it. Epicurus is blamed for not owning his improvement from the inventions of this philosopher, and reproached with having only reformed the system of Democritus in some places, of which Leucippus was the first author.³

CLEANTHES.

Cleanthes was of Assos in Troas.⁴ He was worth but four drachmas, or thirty pence, when he came to Athens. He recommended himself highly by the courageous patience, with which he supported the hardest and most painful labours. He passed almost the whole night in drawing water for a gardener, in order to gain subsistence, and to enable himself during the day to apply to the study of philosophy. Being cited before the judges of the Areopagus, to give an account, according to one of Solon's laws, how he lived, he produced the gardener as an evidence, and without doubt his own hands, hard and callous with labour. The judges, in a transport of admiration, ordered him ten minæ, about thirty pounds, out of the public treasury. Zeno forbade him to accept of them, so much was poverty in honour with these philosophers! He filled the chair of the Porch with great reputation.

His genius was naturally heavy and slow; but he overcame that defect by tenacious application to study. Eloquence was not his talent. He, however, thought fit to compose a Rhetoric, as well as Chrysippus, of whom we shall soon speak; but both with such bad success, that, if we may believe Cicero, who certainly was a good judge in this case, those works were fitter to make a man mute than a speaker.⁵

CHRYSIPPUS.

Chrysippus was of Soli a city of Cilicia.⁶ His genius was very subtle, and proper for logical disputations, in which he exercised himself much, and upon which he wrote many tracts. Diogenes Laertius makes them amount to above three hundred. It is said that the occasion of his writing so much, was his envy of Epicurus, who had composed more books than

² Strab. l. xvi. p. 537.

³ Cic. de Nat. Deor. l. i. n. 72, 73.

⁴ Laert.

⁵ Scripsit artem rhetoricam Cleanthes, Chrysippus etiam, sed hic, ut, si quis obmutescere concupierit, nihil aliud legere debeat. De Finib. l. iv. n. 7.

⁶ Laert.

¹ Laert.

any other philosopher: but he never came up to that rival. His works were little laboured, and by necessary consequence incorrect, full of tedious repetitions, and often even contradictions. It was the common fault of the Stoics, to introduce much subtilty and dryness into their disputations either by word of mouth or in writing. They seem as carefully to have avoided all beauty of style, as depravity of morals. Cicero did not blame them much for wanting a talent entirely foreign to their profession, and not absolutely necessary to it. "If a philosopher," says he, "have eloquence, I do not like him the worse for it: if not, I make it no crime in him."⁷ He was satisfied if they were clear and intelligible; for which he valued Epicurus.⁸ Quintilian often cites with praise a work written by Chrysippus upon the education of children.

He associated himself for some time with the Academics,⁹ maintaining after their manner both sides of a question. The Stoics complained, that Chrysippus had collected so many and so strong arguments for the system of the Academics, that he could not afterwards refute them himself, which had supplied Carneades their antagonist with arms against them.

His doctrine, in many points, did no honour to his sect, and could only disgrace it.¹⁰ He believed the gods perishable, and maintained that they would actually perish in the general conflagration. He allowed the most notorious and most abominable incests; and admitted the community of wives among sages. He composed several writings full of the most horrid obscenities. Such was the philosopher,¹¹ who passed for the most solid support of the Porch, that is to say, of the most severe sect of the Pagan world. It must appear astonishing after this, that Seneca¹² should praise this philosopher, whom he joins with Zeno, in the most magnificent terms. He goes so far as to say of both the one and the other, that they had done greater

things in their closets, than if they had commanded armies, filled the first offices of a state, and instituted wise laws; and he adds, that he considers them, not as the legislators of a single city, but of all mankind.

Chrysippus died in the 143d Olympiad, A. M. 5793. A tomb was erected for him among those of the most illustrious Athenians. His statue was to be seen in the suburb of Ceramica.

DIOGENES the Babylonian.

Diogenes the Babylonian was so called, because his country, Seleucia, was in the neighbourhood of Babylon. He was one of the three philosophers deputed by Athens to the Romans. He showed great moderation and tranquillity of soul upon an occasion capable of moving the calmest and most patient of men. He was expatiating upon anger.¹³ A young man of great impudence and presumption spit in his face, probably to try whether he practised himself the doctrine he taught others. The philosopher, without seeming moved, or raising his voice, said coldly; "I am not angry: but I doubt whether I ought not to be so." Did such a doubt suit the apathy of a Stoic?

ANTIPATER.

Antipater was of Sidon. He is often mentioned in the fourth book of Academical Questions as one of the most learned and esteemed of the Stoics. He was the disciple of Diogenes the Babylonian, and Posidonius was his.

PANÆTIUS.

Panætius was, without contradiction, one of the most famous philosophers of the Stoic sect. He was a Rhodian, and his ancestors had commanded the armies of that state.¹⁴ We may date his birth about the middle of the 148th Olympiad, A. M. 5814. He perfectly answered the peculiar care that had been taken of his education, and devoted himself wholly to the study of philosophy. Inclination, perhaps prejudice, determined him in favour of the Stoic sect, at that time in the highest credit. Antipater of Tarsus was his master. He heard him as a man that understood the rights of reason;¹⁵ and notwithstanding the blind deference, with which the Stoics received the decisions of the founders of the Porch, Panætius

⁷ Videmus iisdem de rebus jejundè quosdam et exilliter, ut eum, quem acutissimum ferunt, Chrysippum disputasse; neque ob eam rem philosophia non satisfecisse, quòd non habuerunt hanc dicendi ex arte alienam facultatem. *De Orat.* l. i. n. 49.

⁸ A philosopher, si affert eloquentiam, non asperner: si non habeat, non admodum flagitem. *De Finib.* l. i. n. 15.

⁹ Oratio me istius philosophi non offendit. Nam et complectitur verbis quod vult, et dicit planè quod intelligam. *Ibid.*

¹⁰ *Academ.* l. iv. n. 7.

¹¹ *Plut. contra Stoic.* pp. 1074, 1075. Laert.

¹² Fulcire putatur porticum Stoicorum. *Academ.* 4, 75.

¹³ Nos certè sumus, qui dicimus, et Zenonem et Chrysippum majora egisse, quàm si duxissent exercitus, gessissent honores, leges tulissent, quas, non uni civitati, sed toti humano generi tulerunt. *Senec. de Ot. sup.* c. 32.

¹⁴ Et de ira cùm maximè disserenti adolescens protervus inspuat. Tulit hoc ille leniter ac sapienter. Non quidem, inquit, irascor: sed dubito tamen an irasci oporteat. *Senec. de ira.* l. iii. c. 38.

¹⁵ *Strab.* l. xiv. p. 655.

¹⁶ *Divin.* l. i. n. 6.

abandoned those without scruple, which did not appear sufficiently established.

To satisfy the desire of knowledge, which was his darling passion, he quitted Rhodes, without regard to the advantages for which the greatness of his birth seemed to design him. The most distinguished persons in every kind of literature usually assembled at Athens, and the Stoics had a famous school there. Panætius frequented it with assiduity, and at length supported its reputation with dignity. The Athenians resolved to make him their own, and offered him the freedom of their city; for which he returned them his thanks. ¹ "A modest man," said he to them in respect to Proclus, "ought to content himself with one country:" in which he imitated Zeno, who, lest it might be injurious to his own citizens, would not accept the same favour.

The fame of Panætius soon extended itself beyond the seas. The sciences had for some time made considerable progress at Rome. The great cultivated them in emulation of each other, and those whom their birth or capacity had placed at the head of the public affairs, made it their honour to protect them to the utmost. Such was the state of things when Panætius came to Rome. He was ardently desired there. The young nobility flew to hear him; and the Scipios and the Lælii were of the number of his disciples. A tender friendship united them from that time, and Panætius, as many writers inform us, attended Scipio in his several expeditions. To make him amends, that illustrious Roman, on a signal occasion, gave him the most grateful marks of his confidence. Panætius was the only one upon whom he cast his eyes, when the senate appointed him ambassador to the nations and kings of the east in alliance with the commonwealth. ² The credit of Panætius with Scipio was not useless to the Rhodians, and was often employed for them with success. ³

The year of his death is not precisely known. Cicero tells us, that Panætius lived thirty years after having published his treatise upon the duties of man, which Cicero has diffused into his: but it is not known at what time that treatise appeared. It is probable that he published it in the flower of his age. The value Cicero set on it, and the use he made of it, are good proofs of the excellency of this work, of which we therefore should regret the loss. He composed many others. The reader may see an account of them in the memoir of the Abbé

Sevin upon the life of Panætius, ⁴ from which I have extracted all I have said of them in this place.

To the praise of the Stoics it must be confessed, that less intent than other philosophers upon frivolous and often dangerous speculations, they devoted their studies to the clearing up of those great principles of morality, which are the firmest supports of society: but the dryness and stiffness that prevailed ⁵ in their writings, as well as in their manners, disgusted most of their readers, and greatly lessened their utility. The example of Cleanthes and Chrysippus, the founders of the Porch, did not mislead Panætius. Attentive to the good of the public, and aware that the useful generally is not current without the agreeable, he united solidity of argument with beauty and elegance of style, and diffused into his works all the graces and ornaments of which they were susceptible.

POSIDONIUS.

Posidonius was of Apamea in Syria, but he passed the greater part of his life at Rhodes, where he taught philosophy with much reputation, and was employed in the affairs of the public with the same success. Pompey, on his return from his expedition against Mithridates, touched at Rhodes in order to see him. He found him sick. We shall see in the sequel, in what manner this visit passed.

EPICTETUS.

I should injure the sect of the Stoics, if in the number of its followers I omitted Epictetus, the man perhaps of all these philosophers, who did it most honour by the sublimity of his sentiments, and the regularity of his life.

Epictetus was born at Hierapolis, a city of Phrygia near Laodicea. The meanness of his extraction has prevented us from the knowledge of his parents. He was the slave of one Epaphroditus, whom Suidas calls "one of Nero's guards;" whence he took his name Epictetus, which signifies *bought servant* or *slave*. It is neither said by what accident he was brought to Rome, nor how he came to be sold to Epaphroditus: it is only known that he was the latter's slave. Epictetus was apparently made free. He always was a follower of the Stoic philosophy, which was at that time the most perfect and the most severe sect. He lived at Rome

¹ Plut. de Stoic. repugn. p. 1084. Procl. in Hesiod. p. 161.

² P. Africanus historicus loquuntur, in legatione illa nobili quam obijt, Panætium unum omnino comitem fuisse. Acad. Quæst. l. iv. n. 3.

³ Plut. in Moral. p. 814.

⁴ Tom. x. des Mem. de l'Acad. des Belles Lettres.

⁵ Stoici horridiores evadunt, asperiores, duriores et oratione et moribus. Quam illorum tristitiam atque asperitatem fugiens Panætius, nec acerbissimum sententiarum, nec discerendi spinas probavit: fuitque in altero genere mitior, in altero illustrior. De Finib. l. iv. n. 78, 79.

till the edict of Doinitian, A. D. 96, by which all philosophers were banished from thence. If we may believe Quintilian, 'many of them concealed great vices under so fair a name, and had acquired the reputation of philosophers, not by their virtue and knowledge, but by a grave and severe countenance, and a singularity of dress and behaviour, which served as a mask for very corrupt manners. Quintilian is perhaps a little excessive in this description, with the view of pleasing the emperor: but it is certain, that it could in no manner be applied to Epictetus. Upon quitting Rome, he went to settle at Nicopolis, a considerable city of Epirus, where he lived many years, always in great poverty, but highly honoured and esteemed. He returned afterwards to Rome in the reign of Adrian, with whom he was in great consideration. Neither the time, place, nor any other circumstances of his death are mentioned: he died at a sufficiently great age.

He confined all his philosophy to suffering ills patiently, and moderation in pleasure, which he expressed by the two Greek words, *ἀνίγει καὶ ἀείρει*, *sustine et abstine*. Celsus, 'who wrote against the Christians, says, that upon his master's bending his leg with great violence, he told him without emotion, and in a laughing manner: "Why you'll break my leg." And as it happened so, he continued in the same tone: "Did not I tell you, that you'd break it?"

Lucian⁶ ridicules a man, who bought Epictetus' lamp at a great price, 'though only an earthen one; as if he had imagined that by using it he should become as wise as that admirable and venerable old man.

Epictetus had composed many works, of which only his *Enchiridion* or *Manual* remain. But Arrian, his disciple, has written a great work, which, as he pretends, consists solely of what he had heard him say, and which he had collected as near as possible, in his own terms. Of the eight books which formed this work, we have only four.

Stobæus has preserved us some sentences of this philosopher's, which had escaped the diligence of his disciple. I shall cite only two of them in this place.—"To be rich does not depend on thee, but to be happy does. Riches themselves are not always a good, and certainly are always of short duration; but the happiness derived from wisdom, endures for ever."—

"When thou seest a viper or a serpent in a box of gold, dost thou esteem it the more, and hast thou not always the same horror for it on account of its venomous nature? Have the same for the wicked man, when thou seest him surrounded with splendour and riches."—"The sun does not stay to be implored to impart his light and heat. By his example do all the good thou canst, without staying till it be asked of thee."

The following prayer Epictetus desired to make at his death, which I take from Arrian. "O Lord, have I violated your commandments? Have I abused the gifts you have conferred upon me? Have I not submitted my senses, wishes, and opinions, to you? Have I ever complained of you? Have I accused your providence? I have been sick, because it was your will; and it was also mine. It was your will that I should be poor, and I was contented with poverty. I have been of the meanest of the people, because it was your will; and did I ever desire to be otherwise? Was I ever afflicted for my condition? Have you ever surprised me murmuring and dejected? I am still entirely ready to undergo whatever you shall please to ordain for me. The least sign from you is an inviolable order for me. It is your will that I should quit this magnificent scene: I go, with a thousand most humble thanks, that you have vouchsafed to admit me to see your works, and to display to my eyes the admirable order, with which you govern this universe." Though it be easy to observe in this prayer several strokes borrowed from Christianity, which at that time began to cast a great light, we, however, perceive in it a man well satisfied with himself, and who, by his frequent interrogations, seems to defy the Divinity himself to find any fault in him. A sentiment and prayer truly worthy of a Stoic, all proud of his pretended virtue! St. Paul, who abounded so much in good works, did not speak such language. "I judge not mine own self," said he. "For I know nothing by myself," (or as the French expresses it better, "though my conscience reproaches me with nothing,") "yet am I not hereby justified: but he that judgeth me is the Lord."⁷ For the rest, this prayer, all defective as it is, will condemn many Christians. For it shows us, that a perfect obedience, an entire devotion, and total resignation to the will of God, were considered by the pagans themselves, as the indispensable duties of creatures to him from whom they hold their being. This philosopher knew the terms of duties and virtues; but had the misfortune to be ignorant of the principle of them.

6 Nostris temporibus sub hoc nomine maxima in plerisque vitia latuerunt. Non enim virtute ac studiis, ut haberentur philosophi, laborabant; sed vultum, et tristitiam, et dissentientem à cæteris habitum pessimis moribus præstebant. *Quintill. l. i. in Proem.*

7 Orig. in Cels. l. vii.

8 Lucian. advers. indoct. p. 548.

9 Three thousand drachmas, about £73.

Epictetus was at Rome at the time when St. Paul made so many conversions there, and when Christianity almost at its birth shone out with so much lustre in the unexampled constancy of the faithful. But far from improving from so radiant a light, he blasphemed against the faith of the primitive Christians, and the heroic courage of the martyrs. In the fourth chapter of the seventh book of Arrian, after having shown, that a man conscious of his liberty, and convinced that nothing can hurt him, because he has God for his deliverer, fears neither the guards nor swords of tyrants, Epictetus adds: "*Frenzy and custom have been capable of inducing some to despise them, as the Galileans; and shall not reason and demonstration produce the same effect?*" Nothing was more contrary to the doctrine of the gospel than the pride of the Stoics.

CHAPTER III.

History of the Philosophers of the Italic Sect.

I have already said, that the Italic sect was so called, because it was instituted by Pythagoras in that part of Italy called Græcia Magna.

I shall divide this chapter into two articles. In the first I shall relate the life of Pythagoras, and that of Empedocles the most famous of his disciples. In the second I shall treat the division of the Italic into four other sects.

ARTICLE I.

PYTHAGORAS.

The most common opinion is that Pythagoras was of Samos, and son of Mnesarchus the sculptor.¹ He was at first the disciple of Pherecrates, who is ranked in the number of the seven sages. After the death of his master, as he had an extraordinary desire of learning and of knowing the manners of strangers, he abandoned his country, and all he had, for the sake of travelling. He remained a considerable time in Egypt, to converse there with the priests, and to learn from them whatever was most occult in the mysteries of their religion and learning. Polycrates wrote in his favour to Amasis king of Egypt, in order that he might treat him with distinction, A. M. 3440, Ant. J. C. 564. Pythagoras went afterwards into the country of the Chaldeans, to acquire the learning of the Magi. Some imagine that he might have seen Ezekiel and Daniel, and have improved from their lessons at Babylon. After having travelled into different parts of the East,

he went to Crete, where he contracted a great intimacy with the wise Epimenides. And at last, after having enriched himself with various knowledge in the several countries where he had been, he returned to Samos, laden with the precious spoils which had been the motives, and were the fruits of his travels. His grief to see his country oppressed by the tyranny of Polycrates, made him resolve on voluntary banishment. He went into that part of Italy which was called Great Greece, and settled at Crotona in the house of Milo, the famous boxer, where he taught philosophy. It is from this place that the sect of which he was author, was called the Italic sect.

Before him, as I have observed already, those who excelled in the knowledge of nature, and had acquired reputation by a virtuous and regular life, were called sages, *sapient*.² That name appearing too proud to him, he assumed another, which implied, that he did not ascribe the possession of wisdom to himself, but only the desire of possessing it. This was *Philosopher*, that is to say, lover of wisdom.

The reputation of Pythagoras soon spread over all Italy, and brought a great number of disciples to hear him. Some make Numa of this number, who was elected king of Rome: but they mistake. Pythagoras flourished in the time of Tarquin the last king of the Romans, that is in the 220th year of Rome; or, according to Livy, in the reign of Servius Tullius,³ A. M. 3472. The error⁴ of those who make him king Numa's cotemporary is glorious for them both. For they had not fallen into it, if they had not believed that Numa could not have shown so much ability and wisdom in his government, if he had not been the disciple of Pythagoras. Certain it is that his reputation afterwards became very great at Rome. The Romans must have conceived a very high idea of him, as upon being commanded by an oracle during the war with the Samnites to erect two statues, the one to the bravest, and the other to the wisest, of the Greeks, they set up those of Alcibiades and Pythagoras.⁵ Pliny was much surprised that they chose either of them.

He made his scholars undergo a severe noviciate of silence for at least two years: and extended it to five with those in whom he discerned a too great itch for talking.⁶ His disciples were divided into two classes.⁷ The one

³ Tusc. Quæst. l. v. n. 9.

⁴ Tusc. Quæst. l. i. n. 38. Tusc. Quæst. l. iv. n. 3.

⁵ Ovid has followed this false tradition in the fifteenth book of the *Metamorphoses*.

⁶ Plut. in Num. p. 63. Plin. l. xxxiv. c. 6.

⁷ Loquaciores enimvero ferme in quinquennium, velat in exilium vocis, mittebantur. *Apu. in Florid.*

⁸ Clem. Alex. Strom. l. 5.

¹ So the Christians were called.

² Diog. Laert.

were simple hearers, *ἀκουστικοί*, hearkening to and receiving what was taught them, without demanding the reasons of it, of which it was supposed they were not yet capable. The others, as more formed and intelligent, were admitted to propose their difficulties, *μαθηματικοί*, to penetrate deeper into the principles of philosophy, and to learn the reasons of all that was taught them.

Pythagoras considered geometry and arithmetic, as absolutely necessary to enlarge the minds of young people, and to prepare them for the study of great truths. He also set great value upon, and made great use of, music, to which he referred every thing;⁹ pretending that the world was formed by a kind of harmony imitated afterwards by the lyre; and he annexed peculiar sounds to the motion of the celestial spheres which revolve over our heads. It is said that it was the¹⁰ custom of the Pythagoreans on rising from bed, to awaken the mind with the sound of the lyre, in order to make themselves more fit for action: and before going to bed, they resumed their lyre, which no doubt they touched to a softer strain, in order to prepare themselves for sleep, by calming whatever might remain of the tumultuous thoughts of the day.

Pythagoras had a great influence over the minds of his scholars. His having advanced any thing sufficed for them to be convinced of it without farther proof: whence came the famous saying *ἀνρίς ἴσα, ipse dixit, he (the master) has said it*. Atreprimand which he gave one of his scholars in the presence of all the rest, so sensibly affected him, that he could not survive it, and killed himself.¹¹ From that period Pythagoras, instructed and afflicted by so mournful an example, never rebuked any body except in private.

His doctrine, and still more his example, produced a wonderful change in Italy, and especially at Crotona, where he principally resided. Justin¹² describes at large the reformation, which he introduced into that city. "He came," says he, "to Crotona, and having found the inhabitants in general abandoned to luxury and debauchery, he conciliated them at length by his

authority to the rules of a prudent frugality. He continually praised virtue, and inculcated its beauty and advantages. He represented in the most lively terms the shame of intemperance, and enumerated the states which had been ruined in consequence of vicious excesses. His discourse made such an impression on the people, and occasioned so general a change in the city, that it seemed a quite different place, and retained no marks of the ancient Crotona. He spoke to the women separately from the men, and the children from their fathers and mothers. To the wives he recommended the virtues of their sex, chastity, and submission to their husbands; to the youth, profound respect for their fathers and mothers, and a taste for study and the sciences.¹³ He insisted principally upon frugality the mother of all virtues; and prevailed upon the ladies to renounce the fine clothes, and rich ornaments, which they thought essential to their rank, but which he considered as the food of luxury and vice. These they sacrificed to the principal divinity of the place, which was Juno; showing by so generous a conduct they were entirely convinced, that the true ornament of ladies was unspotted virtue, and not magnificence of dress. The reformation which the warm exhortations of Pythagoras produced among the youth, may be judged," adds the historian, "from their success with the ladies, who generally adhere to their ornaments and jewels with almost invincible passion." In juvenute quoque quantum profligatum sit, victi seminarum contumaces animi manifestant." This last reflection, which naturally enough expresses the character of the ladies, is not made only by Justin. St. Jerome also observes, "that the sex are naturally fond of ornaments."¹⁴ "We know ladies," says he, "of distinguished chastity, who love to adorn their persons, not for the sake of pleasing any man, but to please themselves." And he adds elsewhere,¹⁵ that some of them carry their taste to an excess which knows no bounds, and will hearken to no reason: "Ad quæ ardent et insaniunt studia matronarum."

The zeal of Pythagoras was not confined to his school, and the instruction of private persons, but even penetrated into the palaces of the great. That philosopher knew, that to inspire princes and magistrates with the principles of

9 Pythagoras atque eum secuti, acceptam sine dubio antiquitus opinionem vulgaverunt, mundum ipsum ea ratione esse compositum, quam postea sit lyra imitata. Nec illa modo contenti dissimilium concordia, quam vocant æquoriar, sonum quoque his motibus dederunt. *Quintil.* l. i. c. 10.

10 Pythagoreis certè moris fuit, et cùm evigilassent, animos ad lyram excitare, quo essent ad agendum erectiores; et cùm somnum paterent, ad eandem priùs lenire mentem, ut, si quid fuisset turbidiorum cogitationum, componerent. *Quintil.* l. ix. c. 4.

11 Plut. de adul. et amic. discr. p. 70.

12 L. xx. c. 4.

13 Inter hæc, velut genetricem virtutum frugalitatem omnibus ingereret, consecutusque disputationum assiduitate erat, ut matrone auratas vestes, cæteraque dignitatis sue ornamenta, velut instrumenta luxurie, deponerent, eaque omnia delata in Junonis ædem ipse deæ consecrarent; præ se ferentes, vera ornamenta matronarum pudicitiam, non vestes, esse. *Justin.* l. xx. c. 4.

14 Φιλίασται genus fœmineum est: multasque etiam insignis pudicitie, quamvis nulli virorum, tamen sita scimus libenter ornari. *Hieron. Epist. ad Gauden.*

15 Hieron. Ep. ad Demetr.

honour, probity, justice, and love of public good, was labouring for the happiness and reformation of whole nations. He had the glory of forming disciples, who proved excellent legislators: ¹ Zaleucus, Charondas, and many others, whose wise laws were so useful to Sicily, and that part of Italy called Great Greece, and who have a juster title to the highest commendation, than those famed conquerors, who have made themselves known to the world only by ravages, fire, and sword. He took great pains to put an end to wars in Italy, and to calm the intestine factions which disturbed the tranquillity of states. War, said he, should be made only against these five things: diseases of the body, ignorance of the mind, passions of the heart, seditions of cities, and discord of families. These five enemies he is for combating with the utmost ardour and perseverance.

The inhabitants of Crotona thought proper, that their senate, which consisted of a thousand persons, should act in all things by the advice of so great a man, and determine nothing but in concert with him: such credit had his prudence and zeal for the public good acquired him. ² Crotona was not the only city that had the benefit of his counsels: many others experienced the good effects of this philosopher's studies. ³ He went from one to another to diffuse his instructions with greater fruit and abundance, and he left behind him, in all places where he continued any time, the precious traces of his residence in the good order, discipline, and wise regulations which he established in them.

His maxims of morality were admirable, and he was for having the study of philosophy tend solely to the rendering men like God. Hierocles ⁴ gives this praise to a piece of poetry, entitled *Carmen aureum*, (golden verses) which contain this philosopher's maxims. But his notions of the nature of God were very imperfect. ⁵ He believed that God is a soul diffused into all the beings of nature, and from which human souls are derived: an opinion which Virgil, in the fourth book of the *Georgics*, has expressed in fine verses. ⁶ Velleius, in Cicero,

refutes this opinion in an agreeable but solid manner. "If this were so," says he, "God would be divided and torn to pieces, when these souls were taken from his substance. He would suffer, and a God is not capable of suffering, in a part of himself, whenever they suffer, as frequently happens. Besides, how comes it that the mind of man should be ignorant of any thing, if it were God?"

The Metempsychosis, or transmigration of souls, was the principal maxim of Pythagoras's philosophy. ⁷ He had borrowed it either from the Egyptians, or the Brahmans, those ancient sages of India. This opinion subsists still among the idolaters of India and China, and is the fundamental principle of their religion. According to it, Pythagoras believed, that the souls of men at their death passed into other bodies, and if they had been wicked, that they were confined in unclean and miserable beasts, to expiate the faults of their past lives; and that after a certain revolution of years or ages, they returned to animate other men.

This philosopher boasted, in this respect, of a privilege entirely singular: for he said ⁸ he remembered in what bodies he had been before he was Pythagoras. But he went no farther back than the siege of Troy. He had first been Æthalides, the supposed son of Mercury, and having had permission to ask whatever he pleased of that god, except immortality, he desired that he might remember all things even after death. Some time after he was Euphorbus, and received a mortal wound from Menelaus at the siege of Troy. His soul passed afterwards into Hermotimus, at which time he entered the temple of Apollo in the country of the Branchidae, where he saw his buckler eaten up with rust, which Menelaus on his return from Troy had consecrated to that god in token of his victory. He was afterwards a fisherman of Delos, named Pyrrhus; and lastly, Pythagoras. He affirmed that in a voyage which he had made to hell, he had seen the soul of the poet Hesiod fastened with chains to a pillar of brass, and suffering great torments. That as for that of Homer, he had seen it hanging on a tree, surrounded with serpents, upon account of the many falsehoods he had invented and ascribed to the gods; and that the souls of the husbands, who had lived amiss with their wives, were severely tormented in that region.

¹ Zaleuci leges Charondæque laudantur. Hi, non in foro, nec in consultorum atriis, sed in Pythagoræ tacito illo sanctoque recessu didicerunt jura, quæ florenti tunc Siciliæ et per Italian Græciæ ponerent. Senec. Epist. 90.

² Val. Max. l. viii. c. 15.

³ Plurimis et opulentissimis urbibus effectus suorum studiorum approbavit. Vol. l. viii. c. 7.

⁴ Hierocl. in præf. ad carm. aurea.

⁵ Pythagoras consult Deum animum esse per naturam rerum omnem intentum et commententem, ex quo animi nostri caperentur. 1. De Nat. Deor. n. 27.

⁶ Esse apibus partem divinæ mentis, et haustus Æthereos dixere. Deum namque ire per omnes Terrasque tractusque maris, cœlumque profundum. Hinc pecudes, armenta, viros, genus omne ferarum, Quemque sibi tenues nascentem accessere vitas.

⁷ Laert.

⁸ ——— Habentque Tartara Panthoiden iterum Orco Demissum; quamvis clypeo Trojana rediæ Tempora testatus, nihil ultra Nervos atque cutem mortis concesserat atræ, Judice te non sordidus auctor Naturæ. Hor. Od. xxviii. l. 1.

To give more weight and credit to these fabulous tales, he had made use of industry and artifice. Upon arriving in Italy, he shut himself up in a subterraneous place, after having desired his mother to keep an exact journal of all that should pass. When he had continued there as long as he judged proper, his mother, as they had agreed before, gave him her notes, wherein he found the dates and other circumstances of events. He quitted this place with a visage pale and wan. In an assembly of the people he assured them, that he was just returned from hell; and to convince them of what he said, he began with relating all that had passed during his absence. All the hearers were moved and surprised with that account, and nobody doubted but that there was something divine in Pythagoras. Fears and cries ensued on all sides. The people of Crotona conceived an extraordinary esteem for him, received his lessons with great eagerness, and begged of him that he would vouchsafe to instruct their wives also.

There must have been a very blind credulity or rather gross stupidity among the people, to have believed such wild chimeras, which often even contradicted themselves. For it does not seem very easy to reconcile the transmigration of souls into different bodies with the pains Pythagoras supposed, that the souls of the wicked suffered in hell; and still less with his doctrine upon the nature of souls. For, as the learned translator of Cicero's books upon the nature of the gods observes, the souls of men, and those of beasts, according to Pythagoras, are of the same substance; that is to say, a particle of that universal Soul, which is God himself.⁹ When therefore it is said, that the soul of Sardanapalus, as a punishment for his excesses, passes into the body of a hog, it is precisely the same thing as to say, God modifies himself into a hog, in order to punish himself for not having been wise and temperate, while he was modified in Sardanapalus. Lactantius¹⁰ has reason for treating Pythagoras as an old dotard, and for saying, he must have thought that he had talked to infants and not to men, to vent such absurd fables and old women's stories to them with a grave and serious air.

Empedocles his disciple rose upon his master's ravings, and composed a genealogy of his soul still more extravagant and various; for according to Athenæus,¹¹ he gave out, that he had been a

girl, a boy, a shrub, a bird, and a fish, before he was Empedocles.

But how could so great a philosopher as Pythagoras, and one so valuable for many excellent qualities, conceive so strange a system? How could he draw so great a number of followers after him, while he advanced opinions capable of shocking every man of common sense? How happens it, that whole nations, in other respects not void of knowledge, and civilized, have retained this doctrine down to our days?

It is most certain that Pythagoras, and all the ancient philosophers, when they began to philosophize, found "the doctrine of the immortality of the soul generally received by all nations;" and it was upon that principle Pythagoras, as well as the rest, founded his system. But when the question was to fix what became of that soul after its brief office of animating a human body, Pythagoras, and all the philosophers with him, were at a loss and in confusion, without being able to resolve upon any thing capable of satisfying a rational mind. They could not reconcile themselves to the Elysian fields for the virtuous, nor Styx for the wicked, mere fictions of the poets. Those amusements for the souls of the blessed seemed very insipid to them; and could they be believed to exist without end, and to endure throughout all eternity? But the souls of those, who had done neither good nor harm, as of infants, what became of them? What was to be their lot, their condition? What were they to do to all eternity? To extricate themselves from this very difficult objection, some philosophers destined the souls of the wise and ingenious to the contemplation of the course of the stars, the harmony of the spheres, the origin of winds, storms, and other meteors, as Seneca, and some other philosophers teach. But the generality of the world could have no part in the learned and speculative joys of this philosophical paradise. What occupation, then, were they to have throughout futurity? They perceived, that it did not consist with so wise a being as God, to create beings purely spiritual every day, only to animate bodies for some short space, and to have no other employment during the rest of eternal duration. Why create so many souls of infants, that die in their births, and at their mothers' breasts, without ever being able to make the least use of their reason? Does it consist with the wisdom of God to produce so many thousands of new souls every day, and to continue creating them every day throughout all eternity, without either use or purpose? What is to be done with those infinite millions of useless inactive souls? What could be the end of forming those incessantly increasing numbers of spirits without either function or end? These were insurmountable difficulties to all the sects of the philosophers. In the impossibility of getting

9 Divinæ particulam auræ. Horat.

10 Videlicet senex vanus (sicut otiosæ anculæ solent) fabulas tanquam infantibus credulis finxit. Quod si bene sensit de iis quibus hæc locutus est, si homines eos existimasset, nunquam sibi tam petulanter mentendi licentiam vindicasset. Sed deridenda hominis levisimi vanitas. Lactant. divin. Institut. l. iii. c. 18.

11 Athen. l. viii. p. 363.

over them, some went so far as to doubt and even deny the immortality of the soul. Others, who could not resolve to renounce a maxim, which God has impressed too deeply on the heart of man for him to be able to disown it, found themselves reduced to make them pass from one body into another: and as they could not conceive eternal punishments, they believed that they sufficiently punished the wicked, in confining them within the bodies of beasts. And thence they fell into all the absurdities, with which they are justly reproached. But the other sects scarce defended themselves better from the absurdities, to which their different systems gave birth.

But to return to Pythagoras. In necessary consequence of the Metempsychosis, he concluded, and one of the capital points of his moral doctrine was, that man committed a great crime, when he killed and ate animals; because all animals, of whatsoever kind they are, being animated with the same soul, it was a horrid cruelty to cut the throat of another self. This is what Ovid,¹ where he feigns that Pythagoras instructs king Numa in his maxims, wittily describes after his manner in these three verses:

Hæu! quantum scelus est in viscera condi,
Congestoque avidum pinguescere corpore corpus,
Alteriusque animantem animantis vivere letho.

But, observes again, with ingenuity, the translator already cited, what would Pythagoras have answered to a man who should have asked him conformably to his own principles: "What injury do I do a fowl in killing it? I only make it change its form, and it is much more likely to gain than lose by that change. Perhaps that soul immediately after quitting its body, will go to animate some embryo, who will one day be a great monarch or philosopher: and instead of seeing itself confined to a fowl, which uncharitable men leave in a yard to suffer the injuries of the weather, and a thousand other inconveniences, it will find itself seated in an assemblage of corpuses, that forming the body, sometimes of an Epicure, sometimes of a Caesar, will glit itself with pleasures and honours."

The same philosopher forbade his disciples to eat beans; whence Horace² calls them the relations or allies of Pythagoras: *faba Pythagoræ cognata*. Different reasons are given for this prohibition; among others, that beans by the great wind they occasion, excite vapours very contrary to the tranquillity of soul necessary to those, who devote themselves to inquiring after truth.³

I should never have done, if I undertook to relate circumstantially all the wonders ascribed to Pythagoras. If we may believe Porphyry, that declared enemy of Christianity, and Iamblichus his disciple, (for they are the worthy authorities for all these miracles) Pythagoras made even the beasts understand and obey him. He commanded a bear that made great ravages in Daunia to be gone, and it disappeared. He forbade an ox, after having whispered a word in his ear, to eat beans: and never more did he touch bean. It is affirmed that he had been seen and heard at the same time disputing in the public assemblies of two cities very remote from each other; the one in Italy, and the other in Sicily. He foretold earthquakes, appeased tempests, expelled pestilence, and cured diseases. His golden thigh ought not to be omitted. He showed it to his disciple Abaris, the priest of Apollo Hyperboreus, to prove to him that he himself was that Apollo; and he had also shown it, says Iamblichus, in a public assembly at Crotona. What wonders does not the same Iamblichus relate of this Abaris? Borne upon a dart as upon a Pegasus, he could pass a great way through the air in a short time, without being stopped or retarded in his course by rivers, seas, or places inaccessible to other men. Would one believe, that the miracles and cures ascribed to Pythagoras could be quoted on the testimony of such authors, as things of a real nature? *Credat Judeus Appella*. People of sense, even among the pagans, openly laughed at them.

It is time to make an end of his history. The circumstances of his death which I shall not enter into particularly, are very differently related. Justin⁴ observes, that he died at Metapontum, whither he had retired after having continued twenty years at Crotona; and that the people's admiration of him rose so high, that they converted his house into a temple, and honoured him as a god. He lived to a very advanced age.

EMPEDOCLES.

Empedocles, a Pythagorean philosopher, was of Agrigentum a city of Sicily. He flourished in the 84th Olympiad, A. M. 360. He travelled much, as was the custom of these times, in order to enrich his mind with curious knowledge. On his return into his country, he frequented the schools of the Pythagoreans. Some make him Pythagoras's disciple: but he is believed to have lived many years after him. He applied himself not only to composing works, but reforming the manners of his country;⁵ and Em-

¹ Metam. l. xv

² Satyr. 6. l. ii

³ Ex quo etiam Pythagoricis interdictum putatur, ne faba vescerentur; quod habet inflationem magnam in cibis, tranquillitati mentis querentis vera contrariam. Cic. l. i. de Divinat. u. 62.

⁴ Justin. l. xx. c. 4.

⁵ Diog. Laert.

pedocles spared no pains to do at Agrigentum what Pythagoras had done at Crotona. The city of Agrigentum was abandoned to luxury and debauchery. Its inhabitants, according to Diogenes Laertius, amounted to eight hundred thousand : which is to be understood of its territory as well as city. I have mentioned its power and riches elsewhere. Empedocles used to say that the people of Agrigentum abandoned themselves to feasting and pleasure, as if they believed they were to die to-morrow ; and applied themselves in building, as if they thought they were never to die. Nothing shows the luxury and effeminacy of the Agrigentines better, than the order given those who were to defend the city in the night against the attacks of the Carthaginians.⁶ By this order each man was to have only one camel's skin, one tent bed, one woollen quilt, and two pillows. The Agrigentines thought this discipline highly severe, and could not be brought to submit to it without difficulty. Among these citizens abandoned to luxury, there were however persons of merit, who made a very good use of their riches, as I have shown elsewhere.

The authority, which Empedocles had acquired at Agrigentum, he employed solely in making peace and good order take place as much as possible.⁷ The supreme command was offered him, which he tenaciously refused. His principal care was to put an end to the divisions that prevailed among the Agrigentines ; and to persuade them to consider themselves as all equals, and members of one and the same family. His next attention was to reform the insolence of the principal persons of the city, and to prevent the dissipation of the public revenues.⁸ As to himself, he employed his own estate in marrying the young women that had no portions. In order to establish equality as much as possible among the citizens of Agrigentum, he caused the council, which consisted of a thousand persons chosen out of the richest citizens, to be abolished.⁹ He rendered it triennial, from perpetual as it was before ; and succeeded in ordaining that the people should be admitted into it, or at least such of them as favoured democratical government.

When Empedocles went to the Olympic games, nothing was talked of there but him.¹⁰ His praises were the common subject of all conversations. It was an ancient custom to sing the verses of the great poets in public, as those of Homer, Hesiod, Archilochus, Mimnermus, Phocylides, and others.¹¹ The same honour was done to those of Empedocles. The singer Cleomenes sung his *Καθάρσεις* Purifications in the

Olympic games. This was a moral poem of three thousand hexameters, composed by our philosopher upon the duties of civil life, the worship of the gods, and the precepts of morality. It took its name from containing maxims, which taught the means for purifying and improving the soul. The *golden verses* are believed to have been part of this poem.

Empedocles was at the same time a philosopher, poet, historian, physician, and even according to some, magician. It is very probable that his magic was only the profound knowledge he had acquired in whatever was most abstruse in nature. The important service he had done the people of Agrigentum, in making certain periodical winds cease to blow, which by their pernicious nature did great damage to the fruits of the earth, was ascribed to magic : as was also what he did for the inhabitants of Selinontum, in curing them of a pestilence occasioned by the stench of the waters of a river that ran through their city. His magic as to the first was his having filled up an opening of a mountain, whence issued the infected exhalations, which a south wind drove upon the territory of Agrigentum ; and as to the second, it was his having caused two small rivers to empty themselves into that of Selinontum, which sweetened the water, and removed its bad quality. The most wonderful effect of Empedocles's magic, and which made him be considered as a god, was the pretended resurrection of an Agrigentine woman, named Panthea.¹² Pliny¹³ speaks of it, as well as Origen.¹⁴ Hermippus, who contents himself with saying, that having been given over by the physicians, and probably taken for dead, she was cured by Empedocles, reduces that miracle to reality ; and Galen¹⁵ seems to give into the same opinion.

It is said that Empedocles,¹⁶ in order to confirm the world in the opinion they had conceived of his divinity by disappearing suddenly, threw himself into the gulf of mount Etna.¹⁷ But this extravagance has much the air of being the invention of such as have pleased themselves either with throwing the marvellous into the lives of these philosophers, or, on the contrary, with rendering them ridiculous. Authors of greater gravity tell us, that he retired into Peloponnesus, where he died at the age of sixty, according to Aristotle, about the beginning of the 88th Olympiad, A. M. 3576.

6 Diod. l. xiii. p. 205.

8 Plut. adv. Col. p. 126.

10 Diog. Laert.

7 Diog. Laert.

9 Diog. Laert.

11 Athen. l. xiv. p. 620.

12 Laert.

14 L. ii. cont. Cels.

16 ———— Deus immortalis haberi

Dum cupit Empedocles, ardentem frigidus Æthnam

Insiluit

13 L. vi. c. 52.

15 De locis affect. l. vi.

17 Diog. Laert.

Horat. de Art. Poet.

3 R

ARTICLE II.

Division of the Italic Sect into four Sects.

The Italic or Pythagorean sect divided itself into four others: that of Heraclitus, which took his name; the Eleatic, of which Democritus was the chief; the Sceptic, founded by Pyrrho; and the Epicurean, instituted by Epicurus.

SECT. I.

Sect of Heraclitus.

Little is known of this philosopher. He was a native of Ephesus, and lived in the 59th Olympiad, A. M. 3460. He is said to have had no masters, and to have become learned by continual meditation.¹

Among many treatises of his composing, that concerning nature, which included his whole philosophy, was the most esteemed. Darius king of Persia, son of Hytaspas, having seen this work, wrote a most obliging Letter to Heraclitus, to desire him to come to his court, where his virtue and knowledge would be more esteemed than in Greece. The philosopher, little affected with offers so gracious and so full of goodness, replied bluntly, That he saw nothing among men but injustice, knavery, avarice, and ambition, and that contenting himself with little, as he did, the court of Persia suited ill with him. He was not in the wrong at bottom. It is not surprising, that a Greek born free and an enemy to the pride of Barbarian kings, and the slavery and vices of courtiers, should set a high value upon poverty with independence, and esteem it infinitely more than the greatest fortunes he could expect from a monarch living in the midst of pomp, pride, effeminacy, and pleasures, in a nation devoted solely to luxury. He might indeed have expressed his refusal in more polite terms.

He was a true manhater. Nothing satisfied him; every thing gave him offence. Mankind were the objects of his pity.² Seeing all the world abandoned themselves to a joy, of the falsehood of which he was sensible, he never appeared in public without shedding tears, which occasioned his being called *the Weeper*. Demo-

critus, on the contrary, who saw nothing serious in the most serious occupations of men, could not forbear laughing at them. The one could find nothing in life but misery, the other nothing but folly and trifling. Both in some sense were in the right.

Heraclitus, disgusted and tired with every thing, at last conceived so great an aversion to mankind, that he retired to a mountain, where he lived upon herbs in company with wild beasts. A dropsy, which that kind of life occasioned, obliged him to return to the city, where he died soon after.

SECT. II.

Sect of Democritus.

Democritus, author of this sect, one of the greatest philosophers of the ancient world, was of Abdera in Thrace.³ Xerxes, king of Persia, having lodged in the house of Democritus's father, left him some Magi, to be his son's preceptors, and to instruct him in their pretended theology and astronomy. He afterwards heard Leucippus, and learned from him the system of atoms and vacuity.

His extraordinary inclination for the sciences induced him to travel into all the countries of the world, where there was hopes of finding learned men. He visited the priests of Egypt, the Chaldeans, and the Persian philosophers. It is even said that he went as far as Ethiopia and India, to confer with the Gymnosophists. He neglected the care of his estate, and left his lands uncultivated, in order to apply himself with less interruption to the study of wisdom.⁴ Some go so far as to say, but with little probability, that he put out his eyes in hopes of meditating more profoundly, when the objects of sight should not divert the intellectual powers of his soul. It was in some measure blinding himself to shut himself up in a tomb, as it is said he did, in order to apply more freely to meditation.

What seems most certain, is, that he expended his whole patrimony in his travels, which amounted to above an hundred talents⁵ (an hundred thousand crowns.) At his return he was cited before the judges, for having spent his estate in that manner. By the laws of his

¹ Laert.

² Heraclitus quoties proderat, et tantum circa se malè viventium, imò malè pereuntium viderat, flebat, miserebatur omnium, qui sibi læti felicesque occurrebant. Democritum contrà aiunt nunquam sine risu in publico fuisse: adeo nihil illi videbatur serium eorum, quæ seriò agebantur. Senec. de Ira, l. ii. c. 10.

Huic omnia, quæ agimus, miseriæ; illi ineptiæ videbantur. De Tranq. anim. c. 15

³ Laert.

⁴ Democritus, verè falsòve, dicitur oculis se privasse, ut quàm minimè animus à cogitationibus abduceretur. Patrimonium neglexit, agros deseruit incultos, quid querens allud, nisi beatam vitam? De Finib. l. v. n. 67.

Miramur, si Democriti pecus edit agellos

Cultaque, dum peregrè est animus sine corpore reus.

Horat. Epist. xii. lib. i.

⁵ Laert. Athen. l. iv. p. 169.

country, those who had squandered their patrimony, were not to be interred in the tombs of their family. He pled his cause himself, and produced, as a proof of the just use he had made of his fortune, the most finished of his works, which he read to the judges. They were so charmed with it, that they not only acquitted him, but caused as much money as he had expended in his travels, undoubtedly out of the public treasury, to be repaid him, erected statues in honour of him, and decreed that after his death the public should charge itself with the care of his funeral: which was accordingly executed. He travelled as a great person, for the sake of instruction, not to enrich himself. He went to the remotest parts of India in quest of the riches of erudition, and scarce regarded the treasures which he found almost at his door, in a country abounding with mines of gold and gems.

He passed some time at Athens, the centre of the sciences, and the abode of wit and learning. But far from endeavouring to display his merit and curious knowledge there, he affected to remain unknown: a circumstance very remarkable in a man of learning and a philosopher!

A fact singular enough is related concerning him, but with no other foundation than Hippocrates's letters, which the learned believe spurious. The Abderites, seeing Democritus their countryman regard nothing, laugh at, and ridicule every thing, say that the air was full of images, endeavour to know what the birds said in their songs, and inhabit tombs almost perpetually, apprehended that his brain was turned, and that he would entirely run mad, which they considered as the greatest misfortune that could happen to their city. They therefore wrote to Hippocrates, to desire him to visit Democritus. The great concern they expressed for the health of so illustrious a citizen does them honour. The illustrious physician they had sent for, after some conversations with the supposed sick man, judged very differently of him, and dispelled their fears, by declaring that he had never known a wiser man, nor one more in his senses. Diogenes Laertius also mentions this journey of Hippocrates to Abdera.

Nothing certain is said either of his birth, or the time of his death, A.M. 3584. Diodorus Siculus makes him die at the age of ninety, the first year of the 90th Olympiad.

Democritus had a fine genius, with a vast, extensive, penetrating wit, which he applied to the whole circle of curious knowledge. Physics,

ethics, mathematics, polite learning, liberal arts, all came within the sphere of his activity.

It is said, that having foreseen a certain year would prove bad for olives, he bought at a very low rate a great quantity of oil, by which he gained immensely. Every body was amazed with reason, that a man who had never seemed to regard any thing but study, and who had always set so much value upon poverty, should on a sudden throw himself into commerce, and entertain thoughts of amassing such great riches.⁸ He soon explained the mystery himself, in restoring to all the merchants, of whom he had bought oil, and who were in despair on account of the bargain they had made with him, all the surplus he had acquired, contenting himself with showing, that to become rich was at his own option. There is something of a like nature in the history of Thales.

Epicurus is obliged to Democritus for almost his whole system; and, to render the elegant Latin expression, he is the source, from which the streams that water the gardens of Epicurus, flow.⁹ The latter was in the wrong, in not confessing his obligations to Democritus, and in treating him as a dreamer. We shall show in the sequel his opinions concerning the supreme good of man, the world, and the nature of the gods. It was Democritus also that supplied the Sceptics with all they said against the evidence of the senses.¹⁰ For besides its being his custom to say, that truth lay hid at the bottom of a well, he maintained that there was nothing real except atoms and vacuity, and that all else was only opinion and appearance.

Plato is said to have been the declared enemy of Democritus. He had collected all his books with care, and was going to throw them into the fire, when two Pythagorean philosophers represented, that doing so would signify nothing, because they were then in the hands of many. Plato's hatred for Democritus appears in his having never cited him, even in places where to refute him was the question, though he has mentioned almost all the rest of the ancient philosophers.

SECT. III.

Sceptic or Pyrrhonic Sect.

Pyrrho, a native of Elis in Peloponnesus, was the disciple of Anaxarchus, and accompanied

⁸ Veni Athenas, inquit Democritus, neque me quisquam ibi agnovit. Constantem nominem et gravem, qui gloriatur à gloria se abstinere! *Thuc. Quest. l. v. n. 104.*

⁷ Laert.

⁸ Mirantibus qui paupertatem et quietem doctrinarum ei celebrant imprimis cordi esse. Atque, ut apparuit causa, et ingens divitiarum cursus, restituisse mercedem (or rather mercedem) anxie et avidæ dominorum ponentis, contentum ita probasse, opes sibi in facili, cum vellet, fore. *Plin. l. xviii. c. 28.*

⁹ Democritus vir magnus in primis, cujus fontibus Epicurus hortulos suos irrigavit. *De Nat. Dvor. l. i. n. 121.*

¹⁰ Laert.

him to India. It was undoubtedly in the train of Alexander the Great, whence we may collect in what time he flourished. He had practised the art of painting, before he applied himself to philosophy.

His opinions differed little from those of Arcesilaus, and terminated in the incomprehensibility of all things. He found in all things, reasons for affirming, and reasons for denying; and therefore he did assent after having well examined both sides of a question, concluding only that hitherto he saw nothing clear and certain in it, *non liquet*, and that the subject in question required farther discussion. Accordingly he seemed during his whole life in quest of truth; but he took care always to contrive subterfuges, to avoid consenting that he had found it: that is to say, in reality he would not find it; and that he concealed so hideous a turn of mind under the specious outside of inquiry and examination. Though he was not the inventor of this method of philosophizing, it however bears his name: the art of disputing upon all things, without ever going farther than to suspend one's judgment, is called *Pyrrhonism*. The disciples of Pyrrho were called also *Sceptics*, from a Greek word *εἰσέτιμος*, which signifies to consider, to examine, because their whole application terminated in that.

Pyrrho's indifference is astonishing; and if all Diogenes Laertius relates of it be true, it rose even to madness. That historian says, he did not prefer one thing to another; that a waggon or a precipice did not oblige him to go a step out of his way; and that his friends who followed him, often saved his life. However, he one day ran away from a dog that flew at him.¹ When he was rallied upon a fear so contrary to his principles, and so unworthy of a philosopher: "It is hard," replied he, "to divest one's self entirely of the man. His master Anaxarchus having fallen into a ditch in his company, he walked on without so much as offering him his hand."² Anaxarchus far from taking it amiss, blamed those who reproached Pyrrho with so inhuman a behaviour, and praised his disciple for his indifference of mind, which argued his loving nothing. What would become of society, and the commerce of life with such philosophers? Pyrrho maintained that life and death were equally indifferent. "Why don't you die then?" somebody asked him. "For that very reason," replied he, "because life and death are equally indifferent."³

He taught an abominable doctrine, that opens the way for crimes of every kind:⁴ That the

honour and infamy, the justice and injustice of actions depended solely upon human laws and custom: in a word, that there was nothing honest or dishonest, just or unjust, in itself.

His country respected him highly, conferred the dignity of pontiff upon him, and granted all philosophers an exemption from taxes upon his account: a very singular conduct in regard to a man, who merited only punishments, whilst they loaded him with honours.

SECT. IV.

Epicurean Sect.

Epicurus, one of the greatest philosophers of his age, was born at Gargettium in Attica, in the third year of the 109th Olympiad, A. M. 3663.⁵ His father Neocles, and his mother Cherestrata, were of the number of the inhabitants of Attica sent by the Athenians into the island of Samos. This occasioned Epicurus's passing his infancy in that island. He did not return to Athens till the eighteenth year of his age.⁶ It was not to fix there: for some years after he went to his father, who lived at Colophon; and afterwards resided in different places. He did not finally settle at Athens, till about the thirty-sixth year of his age, A. M. 3699. He there erected a school in a fine garden which he had purchased. An incredible throng of hearers soon came thither from all parts of Greece, Asia, and even Egypt, to receive his lessons. If we may believe Torquatus,⁷ the warmest assertor of the Epicurean sect, upon this head, the disciples of Epicurus lived in common with their master in the most perfect friendship. Though throughout all antiquity, at least for many ages, scarce three couple of true friends had appeared. Epicurus had known how to unite great numbers of them in one house, and that a small one.⁸ The philosopher Numenius, who lived in the second century, observes that amid the discord and divisions which prevailed among each of the other sects, the disciples of Epicurus had continued in union down to his time.⁹ His school was never divided; but always followed his doctrine like an oracle. His birth-day was celebrated in the time of Pliny the naturalist,¹⁰ that is to say, above four hundred years after his death: they even feasted the whole month in which he

5 Laert.

6 Ibid.

7 De Finib. l. i. n. 65.

8 Epicurus una in domo, et ea quidem angusta, quibus magnos, quantaque amoris conspiratione contentissimos tenuit amicorum greges! Cic.

9 Euseb. Præp. Evangel. l. xiv. c. 2.

10 Plin. l. xxxiv. c. 2.

1 Aristotles apud Euseb. Præp. Evang. l. xiv. c. 18.

2 Laert.

3 Stobæus, sermone 118.

4 Laert.

was born. His picture was to be seen every where.

Epicurus composed a great number of books, which are made to amount to above three hundred; and piqued himself upon quoting nothing, and deriving every thing from his own fund. Though none of them are come down to us, no philosopher's opinions are better known than his. We are most indebted for them to the poet Lucretius, and Diogenes Laertius, not to mention Cicero in his philosophical works. The learned Gassendi has collected with great exactness all that is to be found in ancient writers concerning the doctrine and person of Epicurus.

He placed the Atomical system in exceeding reputation. We shall see that he was not the inventor of it, but that he only changed some things in it. His doctrine upon the supreme good of man, which he makes to consist in pleasure, contributed very much both to decry his sect, and to make it gain ground: it will also be spoken of in the sequel, as well as his opinions concerning the nature of the gods, providence, and destiny.

The praise given Epicurus by Lucretius, his faithful interpreter, shows what we ought to think of that philosopher's system. He represents him as the first of mortals, who had the courage to rise up against the prejudices that blinded the universe, and to shake off the yoke of religion, which till then had held mankind subjected to its empire; and that without being awed either by respect for the gods, their fame, their thunders, or any other motive.

Humana ante oculos fœdè cùm vita jaceret
In terris oppressa gravi sub religione—
Primum Graius homo mortales tollere contrâ
Est oculos ausus, primusque obistere contrâ:
Quem nec fama deùm, nec fulmina, nec minitanti
Murmure compressit cælum.

Epicurus is praised for having never departed from his zeal for the good of his country.¹¹ He did not quit it when besieged by Demetrius Poliorcetes,¹² and determined to share in the miseries it suffered. He lived upon beans, and gave his disciples the same food. He desired good sovereigns, but submitted to those who governed ill—a maxim of great importance to the tranquillity of states. Tacitus expresses it in these terms: *Bonos Imperatores voto expetere, qualescumque tolerare.*¹³ "To pray for good emperors, and suffer them of whatsoever kind they be."

Epicurus died in the torments of a retention of urine, which he supported with extraordinary

patience and constancy, the second year of the 127th Olympiad, A. M. 3733, at the beginning of his seventy-second year.

General Reflection upon the Several Sects of Philosophers.

I have endeavoured to set the history of the different sects of the heathen philosophers in as clear a light as possible. Before I take my leave of that subject, and proceed to explain the various opinions of these sects, I think it incumbent on me to apprise the reader, that he would be deceived, if he expected any considerable change or reformation in the manners of men from the different instructions of all these philosophers. The wisdom, so much boasted of by the most learned among the many sects into which the universe was divided, could determine no question, and multiplied errors. All human philosophy pretended to, was to instruct men in living in a manner worthy of men; because it discovered in men no qualities but such as were human, and allotted to them only the enjoyment of human things. Its instructions are not useless in this point, as they at least dissuade men from the brutal life that dishonours the excellency of their nature, and makes them seek their happiness in the vilest part of their being, which is the body. But all the reformation they effect extends to very few things. What progress have the sects of philosophers made, though endued with so much eloquence, and supported with so much subtilty? Have they not left mankind where they found them, in the same perplexities, prejudices, and blindness? And indeed how could they labour for the reformation of the human heart, as they neither knew wherein it was irregular, nor the source of its irregularity? Without the revelation of the sin of Adam, what could be known of man, and of his real state? Since his fall he abounds with amazing contrarieties.¹⁴ He retains of his first origin characters of greatness and elevation, which his degradation and meanness have not been able to extinguish. He wills, he aspires at every thing. His desire of glory, immortality, and a happiness that includes all good, is infinite. A nothing employs him, a nothing afflicts or consoles him. On a thousand occasions he is an infant; weak, fearful, and dejected; without mentioning his vices and passions, which dishonour, debase, and sometimes make him inferior to the beasts of the field, to which he approaches nearer than to man by his unworthy inclinations.

The ignorance of these two conditions threw

11 Laert.

12 Plut. in Demetr. p. 903.

13 Tacit. Hist. l. iv. c. 8.

14 Mr. Du Guet J. C. crucifié, vol. I. c. 3. d'après M^r. Paschal.

the philosophers into two equally absurd extremes. The Stoics, who made an idol of their chimerical wisdom, were for inspiring man with sentiments of pure and perfect greatness: which is not his condition.¹ The Epicureans, who had degraded him by reducing him to mere matter, inculcated sentiments of pure and absolute meanness into him; and that is also as little his condition. Philosophy was not capable of discerning things so near and at the same time so remote from each other: so near, because united in the state of humanity; and so remote, because they belong by their nature to states entirely different. A distinction of this kind was not made before Jesus Christ, or independently of Jesus Christ. Before him man neither knew, nor was capable of knowing himself. He either exalted or debased himself too much. His teachers always deceived him, either in flattering a pride it was necessary to depress, or augmenting a meanness it was necessary to exalt. Hence I comprehend how necessary revelation was to me, and how precious I ought to think the gift of the faith. It is true, the manner in which the sin of Adam extended down to me, is covered with obscurities. But from that very point wrapt up in darkness, issues the light which makes all clear, and dispels all my difficulties. I am, therefore, far from refusing to believe one only thing, of which the belief is rewarded by the understanding of so many others: and choose rather to submit my reason to a single article, which it does not comprehend, but which is revealed, than to make it fly out against an infinity of others, it comprehends as little, and of which divine revelation neither forbids us the examination, nor removes the difficulties.

PART SECOND.

HISTORY OF PHILOSOPHY.

INTRODUCTION.

By the history of philosophy I understand the doctrines taught by each sect of the ancient philosophers.

Philosophy, among the ancients, consisted of three parts: Dialectics or Logic, which directs the operations of the mind, and the formation of argument; Physics (that included also the metaphysics) which considers the structure of the world, the effects of nature, the existence and attributes of the Divinity, and the nature of the soul; and, lastly, Ethics, which lays down the morals, and treats of the duties of life.

This is an ample subject, and the reader must

not expect that I should treat it to the bottom. I have already declared more than once, that I do not write for the learned. Stoics, Peripatetics, and Epicureans, are frequently mentioned in books and conversation. I thought it proper therefore to give the generality, and persons of no great reading, some knowledge of the principal questions discussed by those philosophers, but without entering into an exact detail of their disputes, which are often very knotty and disagreeable.

Before I proceed to my subject, I cannot help observing the wonderful taste that prevailed among the most considerable persons, for all the sciences, and in particular for the study of philosophy. I do not speak only of the Greeks. We have seen how much the famous sages of Greece were esteemed in the court of Cæsar; the value Pericles set upon, and the use he made of the lessons of Anaxarchus; what passion the most illustrious citizens of Athens had for the conversations of Socrates; in what manner Dion, notwithstanding the allurements of a court abandoned to pleasure, devoted himself to Plato; with what taste even for the most abstracted knowledge, Aristotle inspired his pupil Alexander the Great; and, lastly, how highly Pythagoras and his disciples were considered by the princes of that part of Italy called Great Greece. The Romans did not give place in this respect to the Greeks, from the time that learning and the polite arts were introduced among them. Paulus Æmilius, after the conquest of Macedonia thought one of the most grateful fruits of his victory, the having brought a philosopher from Greece to Rome, to instruct his children who were then in the army, and to converse with himself at his leisure hours. Scipio Africanus, who destroyed Carthage and Numantia,² those formidable rivals of Rome, in the midst of the most important affairs both of war and peace,³ knew how to procure himself moments of repose and retirement, for enjoying the conversation of Polybius and the philosopher Panætius, whom he had always along with him. Lælius, that model of virtue, more worthy of respect for his mild wisdom than his dignities, the intimate friend of Scipio, shared with him in the pleasure of those learned and agreeable conversations. The friendship of

² Africanus duce terrores imperii Romani, Carthaginem Numantiamque deleverat. *Pro Mur.* n. 38.

³ Ille, requiescens à reip. pulcherrimis muneribus, otium sibi sumebat aliquando, et à cotu hominum frequentatque interdum, tanquam in portum se in solitudinem recipiebat. *De Offic.* l. iil. n. 2.

Scipio tam elegans liberalium studiorum omnique doctrinæ et auctor et admirator fuit, ut Polybium Panætiumque, præcellentes ingenio viros, domi militatque semper secum habuerit. *Fell. Polerr.* l. i. c. 13.

¹ Principes de la Foi. vol. i. c. 9.

those two great men for Panætius rose to a great degree of familiarity, and Cicero says, the philosopher highly deserved it.⁴ What honours did not Pompey render Posidonius, going expressly to Rhodes, on his return from his glorious campaigns against Mithridates, to see and hear that philosopher! Lucullus, even while in the field, where a general has scarce time to breathe, found moments of leisure for gratifying his taste for polite learning, and in particular for philosophy, and to hear the philosopher Antiochus, who was the companion of all his expeditions.⁵

The Abbe Gedoy, in respect to a letter of Dionysius Halicarnassensis, observes upon the use which the great men of the Roman commonwealth made of their leisure. The excellent education of the Romans, says he, made them learned almost from their infancy. They were perfectly instructed in their own and the Greek tongues: to learn these two living languages, cost them little. They were inspired very early with a taste for the most excellent writers. That taste, instilled so soon into their infant minds, grew strong with years, and inclined them to cultivate the society of learned men, whose conversation might supply the place of reading, of which their employments deprived them. Thence it followed that the Romans, whose minds were all improved by letters, lived together in a continual intercourse of erudition. And what must have been the conversation of a great number of Romans, when they happened to meet in the same company! Hortensius, Cicero, Cotta, Cæsar, Pompey, Cato, Brutus, Atticus, Catullus, Lucullus, Varro, and many others!

But never did any one carry the taste and ardour, especially for philosophy, higher than Cicero. It is not easy to conceive how a man so much taken up as he was between the affairs of the bar and those of the state, could find time to make himself master, as he had done, of all the questions discussed in his days among the philosophers. That time, as he tells us himself,⁶ in respect to polite learning, was what others bestowed on walking, pleasure, the public shows, and gaming, and which he employed either in his closet, or in familiar conversation with

friends of the same taste as himself. He was convinced that such studies and recreation perfectly suited senators and statesmen, when they did not interfere with what they owed the public.⁷ Were it better, says he, that their meetings were in some measure passed in silence, or turned upon trifles and insignificant matters? The philosophical books he has left us, which are not the least estimable part of his works, show how far he had carried his application in that way. Without speaking of all the rest, he lays down excellent rules in them for those who write upon controverted subjects, and who undertake to refute their adversaries. He is for engaging in disputes only from the love of truth, without prejudice, and without desire either of displaying one's wit, or of carrying one's point.⁸ He banishes all passion, anger, heat, insult, and reproaches, from them. "We are," says he, speaking of himself, "ready to refute our adversaries without tenaciousness in error, and to be refuted by them without resentment."⁹ How amiable is this character! How beautiful is it to seek in disputes, not to overcome our opponents, but solely to make truth triumphant! What advantage would not self-love itself, if it were allowable to hearken to it, find in such a conduct, to which it is not possible to refuse one's esteem, which adds new force to argument, which, while it gains the heart, prepares the mind for conviction, and by politeness and modesty, spares the mortifying confession of being mistaken, the secret pain, with which, through a vicious shame, it is almost always attended. When will this taste for study, and this wise moderation in disputes, revive among us?

We must, however, own for the honour of our times, that we have persons of extraordinary merit, who distinguish themselves particularly by these two qualities. I shall only mention the president Boucher in this place. His learned remarks upon the text of several of Cicero's

8 Si quodam in libro verè est à nobis philosophia laudata, profectò ejus tractatio optimo atque amplissimo quoque dignissima est: nec quidquam aliud videndum est nobis, quos populus Romanus hoc in gradu collocavit, nisi ne quid privatis studiis de operâ publicâ detrahamus. — Quasi verò clarorum virorum aut tacitos congressus esse oporteat, aut ludicos sermones, aut rerum colloquia leviorum. *Academ. Quest.* l. iv. n. 6.

9 Ego, si ostentatione aliqui inductus, aut studio certandi, ad hanc potissimum philosophiam me applicavi, non modo stultitiam meam, sed etiam mores et naturam contemendam puto. *Acad. Quest.* l. iv. n. 65.

Disserentium inter se reprehensiones non sunt vituperandæ. Maledicta, contumelie, tum iracundia, contentiones, concertationesque in disputando pertinaces, indignæ mihi philosophia videri solent. *De Finib.* l. i. n. 27.

10 Nos et refellere sine pertinaaciâ, et refelli sine iracundiâ parati sumus. *Tusc. Quest.* l. ii. n. 5.

4 Homo inprimis ingenuus et gravis, dignus illa familiaritate Scipionis et Lælii, Panætius. *De Finib.* l. iv. n. 23.

5 Majore studio Lucullus cùm omni literarum generi, tum philosophiæ deditus fuit, quàm qui illum ignorabant arbitrabantur. Nec verò incunte ætate solum, sed et quæstor aliquot annos, et in ipso bello, in quo ita magna rei militaris esse occupatio solet, ut non multum imperatori sub ipsa pellibus otio relinquatur — Antiochum secum habuit. *Academ. Quest.* l. iv. n. 4.

6 Mém. de l'Acad. des Belles Lettres, tom. v. p. 126.

7 Pro Arch. poet. n. 13.

books, would alone suffice to show the great extent of that illustrious magistrate's knowledge. The Abbé Olivet, in his preface to the new edition of the Tusculan questions, translated partly by the president Boucher, and partly by himself, with a success that does equal honour to them both, says very well; "Perhaps the example of a man of his rank and merit, may revive the taste for critical learning in France: a taste so common heretofore, that the celebrated Lælius, when he devoted his labours to Cicero, was assisted by the greatest persons of his times. For, to make a transient observation, the list which he has left us of them, and which may be seen at the end of his preface, proves, that this same Cicero, who in our days is banished into the colleges, was two hundred years ago the delight of all the most considerable persons either of the bar or church." But I admire the character of modesty and wisdom, which prevail in the writings of the P. Boucher, still more than his vast erudition. Mr. Davies had made some observations in England upon the same text of Cicero as himself. "The career of us both," says the magistrate, "in this kind of literary amusement, does not resemble those, in which rivals ought only to aspire at the honour of overcoming. The true glory of critics consists in seeking the truth, and in doing justice to those who have found it. I am therefore charmed with doing it to the learned Englishman." He even thanks him for setting him right in respect to certain mistakes. What a difference there is between so moderate and rational a disposition, and the warmth of those authors who are so jealous of their reputation, as not to be able to suffer the slightest criticism.

To return to my subject. The division of philosophy into three parts, logic, ethics, and physics, supplies me with that I am to follow in the ensuing brief account of them.

CHAPTER I.

Opinions of the Ancient Philosophers upon Logic.

Dialectics, or Logic, is the science that lays down rules to direct the operations of the mind in inquiries after the true, and to teach us to discern it from the false.¹ I have observed with sufficient extent in the fourth volume of my treatise upon the study of polite learning, of what advantage this part of philosophy was, and the use to be made of it.

Aristotle, among the ancients, is the most excellent author of logic. Besides several other

works, we have his four books *De Anal.*, wherein he lays down all the principles of reasoning. "This genius," says Rapin the Jesuit in his comparison of Aristotle and Plato, "is replete with reason and understanding, fathoms the abyss of the human mind in such a manner, that he penetrates into all its springs by the exact distinction he makes of its operations. The vast fund of the thoughts of man had not before been sounded, in order to know its depth. Aristotle was the first who discovered this new method for attaining knowledge by the evidence of demonstration, and for proceeding geometrically to demonstration by the infallibility of syllogism, the most accomplished work, the greatest effort of human genius." This is a praise, to which nothing can be well added: and indeed Aristotle cannot be denied the glory of having carried the force of reasoning very far, and of having traced out the rules and principles of it with much subtlety and discernment. Cicero seems to acknowledge this philosopher to be the author and inventor of logic; he ascribes that honour himself to Zeno of Elæa, according to Diogenes Laertius.² Hence it is believed that Zeno was the first who discovered the natural series and dependance of principles and consequences, of which he formed an art, that till then had nothing fixed and regular. But Aristotle, without doubt, improved exceedingly upon him.

This study was the principal occupation of the Stoics, who acknowledged another Zeno for their founder.³ They piqued themselves upon excelling in this kind of philosophy. And indeed, their manner of reasoning was warm, vigorous, close, and proper to dazzle and perplex their opponents; but obscure, dry, and void of all ornament, often degenerating into minuteness, sophism, and captious wrested arguments, to use Cicero's term.⁴ Though the question, Whether there be any thing certain in our knowledge? ought to be considered only as preliminary to logic, it was however made the principal object of it, and what the philosophers disputed with most warmth. Their difference of opinion upon this subject consisted in its being believed by some, that it was possible to know and to judge with certainty; and on the contrary by others, that nothing could be certainly known, nor consequently affirmed, as positive.

Socrates's manner of disputing might have made way for this latter method of philosophiz-

² Aristoteles utriusque partis dialecticæ princeps. *Topic.* n. 6.

³ Stoicorum in dialecticis omnis cura consumitur. *Brut.* n. 118.

⁴ Contortulis quibusdam ac minutis conclusionibus efficiunt non esse malum dolorem. *Thuc.* l. ii. n. 48.

¹ Dialectica veri et falsi disceptatrix et iudex. *Acad. Quest.* l. iv. n. 91.

ing.⁵ Every body knows that he never expressed his opinion, that he contented himself with refusing that of others without affirming any thing positively, and that he declared, he only knew that he knew nothing; and it was even for this, he believed that he deserved the praise given him by Apollo, of being the wisest of mankind. Many think Plato followed the same method, but authors do not agree about it. But it is certain, that the two most celebrated of Plato's disciples,⁶ Speusippus his nephew, and Aristotle, who formed two famous schools, the first that of the Academics, the other that of the Peripatetics, abandoned Socrates's custom of never speaking but with doubt, and of affirming nothing. Reducing the manner of treating questions to certain rules and a certain method, they composed of these rules and method, an art, a science, known under the name of the dialectics, or logic, which makes one of the three parts of philosophy. Though these two schools had a different name, they had at bottom the same principles with some very little difference, and are generally confounded under the name of the ancient Academy.

The opinion of the ancient Academy was, that, though our knowledge has its origin in the senses, the senses do not judge of truth, but the mind, which alone deserves to be believed, because the mind alone sees things as they really are in themselves, that is to say, it sees what Plato calls the ideas, which always subsist in the same state, without suffering any change.

Zeno, the founder of the Stoics,⁷ who was of Citium, a small town of Cyprus, granted something more to the evidence of the senses, which he pretended to be certain and clear, but under certain conditions, that is, if they were perfect and in good health, and without any obstacle to prevent their effect.⁸

Epicurus went still farther. He gave so great a certainty to the evidence of the senses, that he considered them as an infallible rule of truth: so that by his doctrine, objects are precisely what they appear: that the sun, for instance, and the fixed stars, had really no greater magnitude than they seem to have to our eyes.⁹ He admitted another method of discerning truth, that is, the ideas we have of things, without which we can neither form any question, nor pass any judgment. "Antecepta animo

quedam informatio, sine qua nec intelligi quicquam, nec queri, nec disputari potest."¹⁰

Zeno made use of the same principle, and insisted particularly upon the clear, evident, and certain ideas, which we naturally have of certain principles relating to morals and the conduct of life. "The good man," says he, "is determined to suffer every thing, and to perish in the most cruel torments, rather than depart from his duty, and betray his country. I ask why he imposes upon himself a law so cruel, and so contrary in appearance to his interests, and whether it be possible for him to take such a resolution, if he had not a clear and distinct idea in his mind of justice and fidelity, which evidently show him, that he ought to expose himself to every kind of infliction, rather than act what is contrary to justice and fidelity."¹¹ This argument, which Zeno founds upon the certainty of clear and evident ideas, shows the falsehood of the principle generally received in the school of the Peripatetics, "That all our ideas are derived from our senses."¹² For, as the logic of Port Royal observes, there is nothing that we conceive more distinctly than our thought itself, nor any proposition more clear than this, *I think, therefore I am*. Now we could have no certainty of this proposition, if we did not conceive distinctly what it is to be, and what it is to think. And we must not be asked to explain these terms, because they are of the number of those, which are so well understood by all the world, that endeavouring to explain them, would render them obscure. If it cannot be denied, that we have in us the ideas of being and thinking, I would know by which of the senses they entered into our minds. It must then be admitted that they do not in any manner derive their origin from the senses.

Zeno showed also the falsehood and ridicule of the opinion of the Academics by another reflection.¹³ In the ordinary conduct of life, said he, it is impossible to make any choice, or determine upon any thing, without first having a fixed and certain principle in the mind, to de-

¹⁰ Lib. De Nat. Deor. n. 43.

¹¹ Quæro etiam, ille vir bonus, qui statuit omnem cruciatum perferre, intolerabili dolore lacerari potius, quam aut officium prodat aut fidem, cur has sibi tam graves leges imposuerit, cum, quamobrem ita oporteret, nihil haberet comprehensi, percepti, cogniti, constituti? Nullo igitur modo fieri potest, ut quisquam tanti æstimet æquitatem et fidem, ut ejus conservandæ causa nullum supplicium recusset, nisi ille rebus assensus sit, quæ falsæ esse non possunt. *Acad. Quest. l. iv. n. 23.*

¹² Nihil est in intellectu, quod non prius fuerit in sensu.

¹³ Si, quid officii sui sit, non occurrit animo, nihil unquam omnino aget, ad nullam rem unquam impelletur, nunquam movebitur. Quod si aliquid aliquando acturus est, necesse est id ei verum, quod occurrit, videri. *Ibid. n. 24.*

⁵ Acad. Quest. n. 15.

⁶ Ibid. n. 17.

⁷ Acad. Quest. l. i. n. 30.

⁸ Ita tamen maxima est in sensibus veritas, si et sani sunt et valentes, et omnia remouentur quæ obstant et impediunt. *Lib. iv. n. 19.*

⁹ Epicurus omnes sensus veri nuncios dixit esse. *Ibid. l. De Nat. Deor. n. 70.*

termine us to choose one thing rather than another: for without that we should continue always in uncertainty and inaction.

The followers of the ancient Academy, and the Stoics, agreed therefore with each other, as both maintained, though upon different principles, that there were certain means for knowing truth, and consequently evident and certain knowledge.

Arcesilaus rose up with great vivacity against this opinion, confining himself particularly to opposing Zeno, and formed a sect, which was called the Middle Academy,¹ and subsisted down to Carneades, the fourth successor of Arcesilaus, who founded the sect called the New Academy. As it deviated only in some small alterations from the Middle one, they are confounded with each other, and both included in the name of the New Academy. This sect was in great reputation. Cicero embraced it openly, and declared himself its defender. If we may believe him,² it was neither through obstinacy, nor the frivolous desire of overcoming, that Arcesilaus attacked Zeno, but through the obscurity of all knowledge, which had obliged Socrates, as well as Democritus, Anaxagoras, Empedocles, and almost all the ancient philosophers, to confess their ignorance, and to agree, that there was nothing to be known, nothing determined with certainty, not even what Socrates had excepted in saying; "I know only one thing, which is, that I know nothing."

The main point in dispute between Zeno and Arcesilaus was the evidence of the senses. Zeno affirmed, that truth might be certainly known by their aid: Arcesilaus denied it. The latter's principal reason was,³ that there is no certain mark to distinguish false and delusive objects from such as are not so. There are some, which either are, or appear so perfectly like each other, that it is impossible to discern the difference. Hence, in judging and affirming any thing of them, one is liable to err, and to take the true for the false, and the false for the true, which is entirely unworthy of a wise man. Consequently, to act with prudence, he ought to suspend his judgment, and decide nothing.⁴ And this was what Arcesilaus did: for he passed whole days in disputing with others, and in refuting their opinions, without ever expressing his own.

The Academics, by his example, acted ever after in the same manner. We have seen that Carneades, when he went to Rome with two other deputies, spoke one day for, and the next

against justice, with equal force and eloquence. They pretended, that the end of these discourses, wherein they maintained both sides of a question, was, by such inquiries, to discover something true, or at least that came near the truth.⁵ The only difference, said they, between us, and those who believe they know something, is, that these other philosophers boldly advance what they maintain for true and incontestable, and we have the modesty to affirm our positions only as probable and like truth. They added, that their doctrine was accused without foundation of reducing mankind to inaction, and of opposing the duties of life;⁶ as probability and the likeness to truth sufficed to determine their choice of one thing rather than another. We have an excellent treatise of Cicero's, entitled *Lucullus*, which is reckoned as the fourth book of the Academic Questions; wherein Cicero makes Lucullus defend the opinion of the ancient Academy, That there are things which a man is capable of knowing and comprehending; and for himself he maintains the contrary opinion,⁷ which is that of the New Academy, That man's knowledge extends no farther than appearances, and that he can have none but probable opinions. Lucullus, in concluding his dissertation, which is of considerable length and very eloquent, apostrophizes in these terms to Cicero. "Is it possible, after the magnificent praises you have given philosophy, that you can embrace a sect which confounds the true with the false, which deprives us of the use of reason and judgment, which forbids us to approve any thing, and divests us of all our senses? The Cimmerians themselves, who are said never to see the sun, have some fires, some twilight, to illuminate them. But the philosophers, for whom you declare, in the midst of the profound darkness with which they surround us, leave us no spark of light to guide us. They keep us hampered in chains, which will not suffer us to make the least motion. For, to conclude, to forbid us, as they do, to give our consent to any thing whatsoever, is actually to deprive us entirely of the use of our minds, and at the same time to prohibit us all manner of action." It were hard to refute the doctrine of the New Academy better, which really seems to degrade man, is confining him to a state of absolute ignorance, and in leaving nothing to guide him but doubt and uncertainty.

Father Mallebranche, in his inquiry after truth, lays down with great extent an excellent

1 Academ. Quest. l. i. n. 44.

2 Ibid. n. 44.

3 Ibid. n. 66, &c.

4 Ex his illa necessario nata est *irresol.*, id est assensionis retentio. *Acad. Quest.* l. iv. n. 50.

5 Neque nostrae disputationes quidquam aliud agunt, nisi ut, in utramque partem dicendo et audiendo efficiat et tanquam expirant aliquid, quod aut verum sit, aut id quidam proximè accedat. *Lib. iv.* n. 7, 8.

6 Academ. Quest. n. 108, &c. 7 Ibid. l. iv. n. 61, 62.

principle concerning the senses. It is, that the senses were given us by God, not to enable us to know the nature of objects, but their relation to us; not what they are in themselves, but whether they are advantageous or hurtful to our bodies. This principle is highly luminous, and destroys all the little glosses and chicanes of the ancient philosophers. As to objects in themselves, we know them by the ideas we have of them.

I have said that the New Academics contented themselves with denying certainty, and admitting probability.⁹ The sect of Pyrrho, which was a branch that sprung from the Academics, even denied that probability, and pretended, that every thing was equally obscure and uncertain.

But the truth is, that all these opinions, which have made so much noise in the world, never subsisted except in discourse, disputation, or writing, while nobody ever was seriously convinced by them. They were the diversions and amusements of persons of talent and leisure: but they were never opinions by which these persons were inwardly much affected, and consequently willing to direct their conduct. They pretended that sleeping could not be distinguished from waking, nor madness from reason: but notwithstanding all their arguments, could they doubt whether they slept, or whether they were in their senses? But if there had been any body capable of these doubts, at least no man could doubt whether he is, whether he thinks, or whether he lives. For whether he sleeps or wakes, whether he is in or out of his senses, whether he does, or does not, err, it is at least certain, because he thinks, that he is and that he lives; it being impossible to separate being and life from thought, and to believe that what thinks is not, and does not live.

CHAPTER II.

Opinions of the Ancient Philosophers Concerning Ethics, or Morality.

Moral philosophy, or Ethics, whose object is the regulation of the manners, is, properly speaking, the science of man. All other knowledge is in some measure external and without him, or at least may be said not to extend to what is more immediately personal and himself, I mean the heart: for it is in that the whole man consists, and is what he is. They may render him more learned, more eloquent, more just in his reasonings, more knowing in the mysteries of nature, more fit to command armies, and to govern states: but they neither make him better, nor wiser. These however are the only things

that concern him nearly, in which he is personally interested, and without which all the rest ought to appear next to perfectly indifferent.

It was this induced Socrates to believe, that the regulation of the manners was to be preferred to all other science. Before him the philosophers almost wholly devoted themselves to inquiring into the secrets of nature, to measuring the extent of lands and seas, and in studying the course of the stars. He was the first that placed the Ethics in honour,⁹ and to use the terms of Cicero, brought philosophy down from heaven into cities,¹⁰ introduced her also into houses, and familiarized her with individuals, in obliging her to give them precepts upon the manners and conduct of life. She did not confine herself to the care of particulars. The government of states was always the principal object of the reflections of the most celebrated philosophers. Aristotle and Plato have left us several tracts of great extent upon this subject, which have always been highly esteemed, and contain excellent principles. This part of moral philosophy is called *Politics*. I shall not treat it separately in this place; and shall content myself in the sequel, where I shall speak of duties, with making some extracts from Plato and Cicero, which will show what noble ideas they had of the manner of governing states.

Moral philosophy ought to instruct mankind principally in two things. It ought, in the first place, to teach them in what that supreme good, or *happiness*, consists, at which they all aspire; then to show them the virtues and duties, by which they may attain it. It is not to be expected that Paganism should lay down the purest and most perfect maxims upon matters of such importance. We shall find a mixture of light and darkness in it, which will amaze us, and is at the same time highly capable of instructing us.

I shall add a short discourse upon civil law to my account of Ethics, or moral philosophy.

ARTICLE 1.

Opinions of the Ancient Philosophers upon the Supreme Good, or Happiness, of Man.

In all moral philosophy there is not a more important subject, than that which relates to the supreme good of man. Many questions are

⁹ A Socrate omnis, quæ est de vita et moribus, philosophia manavit. *Tuscul. Quæst.* l. iii. n. 8. The more ancient philosophers, and especially Pythagoras, had given their disciples good precepts of morality: but did not make them their principal doctrine like Socrates.

¹⁰ Socrates primus philosophiam deprecavit à cælo, et in urbibus collocavit, et in domos etiam introduxit, et coegit de vita et moribus, rebusque bonis et malis quærere. *Ibid.* l. 5. n. 10.

discussed in the schools of little importance to the generality of men, and in which they might dispense with instructing themselves, without any great detriment to the manners and conduct of life. But the ignorance of what constitutes his supreme good leads man into infinite error, and occasions his walking always by chance, without having any thing fixed and determinate, and without knowing either where he goes, or what paths he ought to take: ¹ whereas that principle once well established, he knows all his duties clearly, and to what he is to adhere in every thing else.

Philosophers are not the only persons that take pains to inquire wherein this supreme good consists; but all men, the learned, the ignorant, the wise, the stupid: there is nobody that does not share in this important question. ² And though the head should continue indifferent about it, the heart could not avoid making its choice. It raises this secret cry of itself in regard to some object: Happy is he who possesses that!

Man has the idea and desire of a supreme good implanted in his nature: and that idea and desire are the source of all his other desires, and of all his actions. Since his fall, he retains only a confused and general notion of it, which is inseparable from his being. He cannot avoid loving and pursuing this good, which he knows only confusedly: but he knows not where it is, nor wherein it consists, and the pursuit of it precipitates him into an infinity of errors. For finding created good things which satisfy some small part of that infinite avidity which engrosses him, he takes them for the supreme good, directs all his actions to them, and thereby falls into innumerable crimes and errors.

This we shall see evidently in the different opinions of the philosophers upon this head. Cicero has treated it with abundance of extent and erudition in his five books, *De Finibus bonorum et malorum*, in which he examines wherein real good and evil consist. I shall confine myself to the plan he has followed, and shall relate after him what the Epicureans, Stoics, and Peripatetics, the three most celebrated sects of philosophy, thought upon this subject.

The two last will from time to time afford us excellent maxims upon different subjects, but

often mixed with false principles and gross errors. We are not to expect to find any thing instructive in them concerning future good. Human philosophy does not exalt men above himself, but confines him to the earth. Though many of the philosophers were convinced of the immortality of the soul, and in consequence that this life is but a moment in respect to the eternal duration of our souls, they have however devoted their whole study and attention to this life of a moment. What was to happen hereafter in the other, was only the subject of some barren conversations, from which they deduced no consequence either for their own conduct, or that of others. Thus these pretended sages, who knew all things except themselves, and to what every particular thing was destined except man, may be justly considered as ignorant and senseless. For, not to know what one is, and whither one goes, to be ignorant of one's end, and of the means for attaining it; to be learned in what is superfluous and foreign, and blind to what is personal and necessary, is certainly to be void of sense.

SECT. I.

Opinions of Epicurus Concerning the Supreme Good.

The name alone of Epicurus suffices to inform us, that in the present question we are not to expect to be inspired by him with noble and generous sentiments. ³

According to all the philosophers, That is called the supreme good, upon which all other good depends, and which depends itself upon no other. Epicurus makes this supreme good consist in pleasure, and by necessary consequence, supreme evil in pain. ⁴ Nature herself, says he, teaches us this truth, and prompts us from our birth to pursue whatever gives us pleasure as our supreme good, and to avoid whatever gives us pain as our supreme evil. There is no more occasion for studied arguments to establish this truth, than there is to prove that fire is hot, snow white, and honey sweet: which are self-evident. Let us suppose, on the one side, a man enjoying the greatest pleasures both of body and mind, without any fear of their being interrupted; and on the other, a man suffering the sharpest pains, without any hope of relief: can we doubt on which side to place supreme good and supreme evil?

As it does not depend upon man to exempt himself from pain, Epicurus opposes that inconvenience with a remedy founded upon a reasoning, which he believes very persuasive. ⁵ "If pain be

¹ Summum bonum si ignoretur, vivendi rationem ignorari necesse est. Ex quo tantus error consequitur, ut, quem in portum se recipiant, scire non possint. Cognitis autem rerum finibus, cum intelligitur quid sit et bonorum extremum et malorum, inventa vitæ via est, conformatiæque omnium officiorum.—Hoc constituto, in philosophia, constituta sunt omnia. *De Finib. bon. et mal.* l. v. n. 15.

² Omnis auctoritas philosophiæ consistit in beata vita comparanda. Beatè enim vivendi cupiditate incensi omnes sumus. *Ibid.* n. 80.

³ Epicurus, in constitutione finis, nihil generosum sapit atque magnificum. *De Finib.* l. i. n. 23.

⁴ *De Finib.* l. i. n. 29, 30.

⁵ *De Finib.* l. 2. n. 93. *Tuscul. Quest.* l. ii. n. 44, 45.

great," says he, "it will be short; if long, it will be slight." As if a disease did not often happen to be at the same time both long and painful, and reasoning had any power over the sense of feeling. He proposed another remedy, of no greater efficacy, against the sharpness of pain; which was, to divert the mind from the evils we suffer, by turning our whole attention upon the pleasures we have formerly enjoyed, and upon those we are in hopes of tasting hereafter.⁶ How! might one reply to him, whilst the violence of pain, racks, burns, and agonizes me, without a moment's intermission, do you bid me forget and disregard it? Is it in my power then to dissemble, and forget in that manner? Can I stifle and silence the voice of nature at such a time?⁷

When he was obliged to give up all these false and wretched reasonings, he had no other evasion than to admit, that his wise man might be sensible of pain, but that he would persist in believing himself happy during it; and to this he adhered.⁸ Cicero tells us, that whilst he talks in this manner, he found it scarce possible to forbear laughing. If the sage be tortured, if he be burned, (one would imagine Epicurus was going to say, that he would bear it with constancy, and not sink under it; but that is not enough for him, he goes still farther) if the sage were in the burning bull of Phalaris, he would cry out with joy: "How grateful is this! How little I value it!"⁹ It is surprising to hear such words from the idolater of voluptuousness, the man who makes supreme good consist in pleasure, and supreme evil in pain. But we are still more surprised when we see Epicurus sustain this generous character to the last, and to hear him in the midst of the acutest pangs of the stone, and the excessive torments of the most terrible colic, cry out: "I am happy. This is the last and the most fortunate day of my life."¹⁰

Cicero asks, how it is possible to reconcile Epicurus with himself? As for him, who does not deny pain to be pain, he does not carry the virtue of the wise man to so high a pitch. "To

me it is enough," says he, "if he supports evils with patience. I do not require that he should suffer them with joy. For undoubtedly pain is a sad, sharp, bitter thing, contrary to nature, and exceedingly hard to undergo."¹¹ This is thinking and speaking reasonably. The language of Epicurus is that of pride and vanity, which seeks to exhibit itself as a spectacle, and whilst it displays a false courage, proves a real weakness. For the rest, these absurd consequences of Epicurus, were inevitably necessary consequences of his erroneous principles. For if the wise man must be happy as long as he is wise, pain, not depriving him of his wisdom, cannot deprive him of his happiness. Thus he is reduced to affirm himself happy in the midst of the most exquisite torments.

It must be owned, that Epicurus has maxims and even actions ascribed to him, which are dazzling and surprising, and which give a quite different idea of his person and doctrine, to what is generally formed of them. And hence many learned and celebrated persons have taken upon them his defence, and written his apology.

He declares loudly, says Cicero,¹² that one cannot live joyously, except with wisdom, honesty, and justice; and that one cannot live with wisdom, honesty, and justice, otherwise than joyously. What does not such a principle include!

Upon moral subjects, and rules of duty, he advances maxims no less noble and severe. Seneca¹³ repeats many of his sayings, which are certainly very laudable. "I was never studious of pleasing the people; for, what I know, the multitude do not approve, and what the multitude do approve, I do not know." Instead of the whole people Epicurus substitutes some man of great virtue and reputation,¹⁴ whom he is for having us set perpetually before our eyes, as our guardian and inspector, in order to our acting in all things, as if he were the eye-witness and judge of our actions.¹⁵ And, in-

11 Tullius dolorem, dolorem esse non negat—Ego, inquit, tantam vim non tribuo sapientiæ contra dolorem. Sit fortis in perferendo, officio satis est: ut læstetur etiam, non postulo. Tristis enim res est sine dubio, aspera, amara, inimica naturæ, ac patiendum tolerandumque difficilis. *Tuscul. Quest.* l. ii. n. 33. et 18.

12 Clamat Epicurus, non posse jucundè vivi, nisi sapienter, honestè, justèque vivatur: nec sapienter, honestè, justè, nisi jucundè. *De Finib.* l. i. n. 57.

13 Senec. Ep. xxix.

14 *Id.* Epist. xi.

15 Aliquis vir bonus nobis eligendus est, ac semper ante oculos habendus, ut sic tanquam illo spectante vivamus, et omnia tanquam illo vidente faciamus. Hoc, mi Lucili, Epicurus præcepit, custodem vobis et pedagogum dedit: nec immeritò. Magna pars peccatorum tollitur, si peccatoris testis adistat. Aliquem habeat animus, quem vereatur, cujus auctoritate etiam secretum suum sanctius faciat.

6 De Finib. l. iii. n. 33, &c.

7 *Id.* l. ii. n. 17.

8 Non est in nostra potestate, fodicantibus his rebus quas malas esse opinemur, dissimulatio vel oblivio. Lacerant, vexant, stimulos admovent, ignes adhibent, respirare non sinunt; et tu oblivisci jubes, quod contra naturam est? *Cicero.*

9 In Phalaridis tauro si erit, dicit; Quam suave est hoc! Quam hoc non curo? *Cicero.*

10 Quid porro? Non aequè incredibile videtur, aliquem in summis cruciatibus positum, dicere: *Beatus sum?* Atqui hæc vox in ipsa officina voluptatis est audita: *Beatissimum*, inquit, *hunc et ultimum diem ago*, Epicurus; cum illum hinc urinae difficultas torqueret, hinc insanabilis exulcerati dolor ventris. *Senec. Epist.* 92.

deed, it were to retrench the greater part of one's faults, to give them a witness one respects; of whom the authority and idea only would make our most secret actions more prudent and blameless.

If you would make Pythocles truly rich, said Epicurus, you must add nothing to his estate, but only retrench his desires and appetites.¹

I should never have done, should I repeat his many other maxims of morality equally just. Does Socrates himself talk better than Epicurus? And some pretend that his life suited his doctrine.

Though the gardens of Epicurus had this inscription, "Pleasure is here the supreme good," the master of them, though very courteous and polite, received his guests with bread and water.² Himself, this teacher of voluptuousness, had certain days, when he satisfied his hunger with great sobriety.³ He says in a letter, that he did not spend quite an *as*, or penny, upon a meal; and that Metrodorus, his companion, who was not so old, spent a whole *as*. We have seen with what courage he suffered the sharpest and most cruel pains in his last moments. What can be said of these facts, and many of the like nature? for many such are related of him. What shall we say also on the other side, of facts in great number directly the reverse, and of his being reproached with abandoning himself to drunkenness and the most shameful debauches, as Diogenes Laertius informs us?

But Cicero cuts the question short in one word, and reduces it to a single point.⁴ "Do you believe," says somebody to him, "that Epicurus was the man some are for having him pass for, and that his design was to inculcate irregularity and debauchery?" "No," replies Cicero: "for I find he also advances very fine maxims, and most severe morality. But here, not his life and manners, but his doctrine and opinions are the question. Now he explains himself upon what he understands by pleasure and happiness in a manner by no means obscure. I understand by that word, says Epicurus, the pleasures of the taste, the pleasures of love, the view of such objects as delight the eye, diversions and music.⁵ Do I add to his words? Have I annexed any thing false to them? If so, pray correct me; for I have no view but to clear up the truth." The same Epicurus

declares, "he cannot so much as conceive that there is any other good, except what consists in drinking, eating, harmonious sounds that delight the ear, and obscene pleasures."⁶ Are not these his own terms, says Cicero? *An hæc ab eo non dicuntur?*⁷ If we suppose that he maintained such a maxim, what regard is to be had for his finest discourses elsewhere upon virtue and purity of manners? The same judgment was passed on them as on the books he wrote upon the Divinity.⁸ People were convinced, that in reality he believed there were no gods. He however spoke of the veneration due to them in the most magnificent terms, in order to screen his real sentiments and person, and to avoid drawing the Athenians upon him. He had the same interest in covering so shocking a doctrine, as that which makes the supreme good consist in voluptuousness.

Torquatus urged extremely in favour of Epicurus, whose doctrine he defended,⁹ the passage where that philosopher said, that without wisdom, honesty, and justice, it was impossible to lead a happy life: *non posse jucundè vivi, nisi honestè, et sapienter et justè vivatur*. Cicero does not suffer himself to be dazzled by an empty glitter of words, with which Epicurus took pains to cover the turpitude of his maxims. He proves at large that wisdom, honesty, and justice, were irreconcilable with pleasure, in the sense that Epicurus gives it, which is a disgrace to philosophy, and a dishonour to nature itself. He asks Torquatus,¹⁰ if, when he should be elected consul, which was soon to happen, he would venture in his speech to the people or senate, to declare, that he entered upon office fully resolved to propose to himself no other view or end in all his actions but voluptuousness? And wherefore would he not venture it, except because he well knows that such language is infamous?

I shall conclude this article with a fine contrast made here by Cicero.¹¹ On the one side he represents L. Thorius Balbus Lanuvinus, one of those men so expert and delicate in voluptuousness, that make it their business and merit to refine upon every thing which bears the name of pleasure: who, void of all chagrin for the present, and all uneasiness about the future, did not abandon himself brutally to the excesses of eating and drinking, nor to other gross diversions; but, attentive to his health and certain

1 Si vis, inquit, Pythoclea divitem facere, non pecuniæ adjiciendum, sed cupiditatibus detrahendum. Senec. Ep. xxi.

2 Senec. Ep. 21.

3 Senec. Ep. 18.

4 Tuscul. Quæst. l. iii. n. 46, 47.

5 Non verbo solum posuit voluptatem, sed explanavit quid diceret. *Saporem*, inquit, et corporum complexum, et ludos, atque cantus, et formas eas quibus oculi jucundè moveantur.

6 Testificatur, ne intelligere quidem se posse, ubi sit aut quid sit ullum bonum, præter illud, quod cibus, aut potione, et aurium delectatione, et obscurâ voluptatè capiatur. *De Finib.* l. ii. n. 7.

7 *De Finib.* l. ii. n. 7. *De Nat. Deor.* l. xi. n. 111.

8 *De Nat. Deor.* l. i. n. 116, 123.

9 *De Finib.* l. ii. n. 51, &c. 10 *Ibid.* n. 74.

11 *Ibid.* l. ii. n. 63, 66.

rules of decency, led an easy life of softness and delight, entertained a company of chosen friends every day at his house, had his table always covered with the finest and most exquisite dishes, denied himself nothing that could flatter his senses agreeably, nor any of those pleasures, without which Epicurus did not conceive how the supreme good could exist; in a word, who was industrious in culling every where, to use the expression, the quintessence of joy and delight, and whose rosy complexion argued the extraordinary fund of health and good plight which he enjoyed. This is the man, says Cicero, addressing himself to Torquatus, who according to your estimate is supremely happy. I am afraid to name the person I design to oppose to him; but virtue itself will do it for me: it is M. Regulus, who of his own accord, with no other force than his word given the enemy, returned from Rome to Carthage, where he knew what torments were prepared for him, and where he was actually put to death by hunger and being kept perpetually awake. It is in those very torments that virtue itself loudly declares him infinitely more happy than your Thorius on his bed of roses and wallowing in voluptuousness.¹² Regulus had commanded in great wars, had been twice consul, and received the honour of a triumph: but he deemed all those advantages nothing in comparison with this last event of his life, which his fidelity to his word and his constancy had drawn upon him: an event, of which the mere repetition afflicts and frightens us, though the reality was matter of joy and pleasure to Regulus.

Put but a Christian suffering for the truth in the place of Regulus, and nothing can be more conclusive than Cicero's reasoning. Without which it is only refuting one absurdity by another, and opposing a false idea of happiness to an infamous happiness.

SECT. II.

Opinions of the Stoics Concerning the Supreme Good.

We now quit the school of least repute among the ancient philosophers for its doctrine and

manners, but which however had abundance of authority, and whose dogmas were almost universally followed in practice, the attraction of pleasure being far more efficacious than the finest reasonings; and proceed to another school much extolled by the Pagan world, from which it derived much honour, and in which it pretended that virtue was taught and practised in all its purity and perfection. It is plain that I speak of the Stoics.

It was a common principle with all the philosophers, that the supreme good consisted in living according to nature: *secundum naturam vivere, summum bonum esse*.¹³ The different manner in which they explained this conformity to nature, occasioned the diversity of their opinions. Epicurus placed it in pleasure: others in exemption from pain: and some in other objects. Zeno, the founder of the Stoics, made it consist solely in virtue. According to him, to live according to nature, in which alone happiness consists, is to live honestly and virtuously. Behold what nature inspires, to what she inclines us, honesty, decency, and virtue: and she inspires us at the same time with a supreme horror for all that is contrary to honesty, decency, and virtue. This truth is evidently seen in children, in whom we admire candour, simplicity, tenderness, gratitude, compassion, purity, and ignorance of all evil and artifice.¹⁴ Whence do they derive such excellent virtues, if not from nature herself, who paints and shows herself in infants as in a mirror? In a more advanced age,¹⁵ who can forget the man so much as to refuse his esteem to wise, sober, and modest youth: and with what eye, on the contrary, do we look on young persons abandoned to vice and depravity? When we read in history, on the one side, of goodness, generosity, clemency, and gratitude; and on the other, of violence, injustice, ingratitude, and cruelty: however remote in time we are from the persons spoken of, are we masters of our opinions, can we forbear loving the one and detesting the other? Observe, says Zeno, the

¹³ De Finib. l. iv. n. 14.

¹⁴ Id indicant pueri, in quibus, ut in speculis, natura cernitur. — Quæ memoria est in his bene merentium! quæ referendæ gratiæ cupiditas! Atque ea in optima quaque indole maximè apparent. De Finib. l. v. n. 61.

¹⁵ In his vero ætatibus quæ jam confirmatæ sunt, quis est tam dissimili homini, qui non moveatur et offensione turpitudinis, et comprobatione honestatis? Quis est qui non oderit libidinosam, protervæ adolescentiam? Quis contra in illa ætate pudorem, constantiam, etiam sui nihil intersit, non tamen diligit? — Cui Tubuli nomen odio non est? Quis Aristidem mortuum non diligit? An obliviscamur, quantopere in audiendo legendoque moveamur, cum piè, cum amicè, cum magno animo aliquid factum cognoscimus? Ibid. n. 62.

¹² Ego, huic quem anteponam, non audeo dicere: dicet pro me ipsa virtus, nec dubitabit isti vestro beato M. Regulum anteponere. Quem quidem, cum sua voluntate, nulla vi coactus præter fidem quam dederat hosti, ex patria Carthaginem revertisset, tum ipsum, cum vigiliis et fame cruciaretur, clamat virtus beatiorum fuisse, quàm potantem in rosa Thorium. Bella magna gesserat, bis consul fuerat, triumpharat: nec tamen sua illa superiora tam magna nec tam præclara ducebat, quàm illum ultimum casum, quem propter fidem constantique cœcepserat; qui nobis miserabilis videtur audientibus, illi perperenti erat voluptarius. De Finib. l. ii.

voice of nature, which cries aloud, that there is no real good but virtue, no real evil but vice.

The Stoics could not reason either more justly or with apter consequence in their principles, which were however the source of their errors and mistakes. On the one side, convinced that man is made for happiness, as the ultimate end to which he is destined; and on the other, confining the whole being and duration of man to this life, and finding nothing in so short a space, more great, more estimable, and more worthy of a man than virtue; it is not to be wondered that they should place man's ultimate end and happiness in it. As they had no knowledge either of another life, or of the promises of eternity, they could not do better in the narrow sphere wherein they confined themselves through the ignorance of revelation. They rose as high as it was possible for them to rise. They were under the necessity of taking the means for the end, the way thither for being there. For want of knowing better, they took nature for their guide: they applied themselves to the consideration of it, by what it has of great and sublime, while the Epicurean considered it only by what it has of earthly, animal, and corrupt. Hence they necessarily made man's happiness to consist in virtue.

As to what regards health, riches, reputation, and the like advantages; or diseases, poverty, ignominy, and the other inconveniences of this kind; Zeno did not place them in the number either of goods or evils, nor make the happiness or misery of mankind depend upon them. He, therefore, maintained, that virtue alone and of itself sufficed to their happiness; and that all the wise, in whatsoever condition they might happen to be, were happy.¹ He, however, set some, though small, value upon those external goods and evils, which he defined in a manner different, as to the terms, from that of other philosophers, but which at bottom came very near the same opinions. We may judge of all the rest by a single example.² The other philosophers considered pain as a real and solid evil, which extremely incommoded the wise man, but which he endeavoured to support with patience; which did not hinder him from being happy, but rendered his happiness less complete. Hence, according to them, a good action exempt from pain, was preferable to one united with it. The Stoics believed, that such an opinion degraded and dishonoured virtue, to which all external goods joined together added no more than the stars to the lustre of the sun, a drop of

water to the vast extent of the ocean, or a mite to the innumerable millions of Cressus; to use their own comparisons. A wise Stoic, therefore, reckoned pain as nothing, and however violent it might be, he was very far from calling it an evil.

Pompey, in his return from Syria, passed expressly by the way of Rhodes³ to see the celebrated Stoic Posidonius. When he arrived at the house of that philosopher, he forbade his lictor to strike the door with his wand, as was the custom. The person, says Pliny, to whose power the East and West were in subjection, was pleased that the *fascies* of his lictor should pay homage to the dwelling of a philosopher.⁴ He found him in bed very ill of the gout, which tormented him cruelly. He expressed his concern to see him in that condition, and that he could not hear him as he had promised himself. That, replied the philosopher, depends upon yourself; it shall never be said that my illness occasioned so great a person to come to my house in vain. He then began a long and grave discourse, wherein he undertook to prove, that there was nothing good but what was honest: and as he was in excessive pain all over while he spoke, he often repeated: "Pain, you do nothing; though you are troublesome, you shall never make me own you an evil."⁵

Another Stoic was of a better faith.⁶ This was Dionysius of Heraclea, Zeno's disciple, whose doctrine he had long and warmly maintained. In the torments of the stone, which made him cry out terribly, he discovered the falsehood of all he had taught in respect to pain.⁷ "I have devoted many years," said he, "to the study of philosophy, and cannot bear pain. Pain is therefore an evil."

It is not necessary to ask the reader's judgment of these two philosophers. The character of these false sages of the pagan world is painted in the most lively colours, in the words and actions of the first. They exhibited themselves as spectacles, and fed themselves up with the attention of others, and the admiration which they believed they occasioned. They bore up against their inward sense through the shame of

³ Tusc. Quæst. l. iii. n. 61.

⁴ Pompeius, confecto Mithridatico bello, intratus Posidonii sapientie professione clari domum, fores percuti de more à lictore vetuit; et fascies lictoris janum submisit is, cui se Oriens Occidentisque submiserat. Plin. l. vii. c. 30.

⁵ Cumque ei quasi facies doloris admoventur, sepe dixit: "Nihil agis, dolor; quamvis sis molestus, nunquam te esse confitebor malum."

⁶ Ibid. n. 60.

⁷ Cùm ex renibus laboraret, ipso in ejulatu clamabat, falsa esse illa, quæ antea de dolore ipse sensit. — "Plurimos annos in philosophia consumpsi, nec ferre possum (dolorem) malum est igitur dolor."

¹ Virtutis tantam vim esse, ut ad beatè vivendum ea ipsa contenta sit. — Sapientes omnes esse semper beatos. De Finib. l. v. n. 77.

² De Finib. l. iii. n. 43, 45.

appearing weak, while they concealed their real despair under the appearance of a false tranquillity.

It must be confessed that pain is the most dreadful proof of virtue. It plunges its sharpness into the inmost soul: it racks, it torments it, without its being possible to suspend the sense of it: it keeps it in spite of it employed by a secret and deep wound, that engrosses its whole attention, and renders time insupportable to it, while every moment seems whole years. In vain does human philosophy endeavour in this condition, to make her wise man appear invulnerable and insensible: she only blows him up with vain presumption, and fills him with a force, which is indeed but cruelty. True religion does not instruct her disciples in this manner. She does not disguise virtue under fine but chimerical appearances. She raises mankind to a state of real greatness; but that is by making them discern and confess their own weakness.

Let us hear Job, the man put to the rudest trial that ever was. He was told by messenger after messenger, almost without any interval, that his flocks and herds were destroyed, his slaves killed or taken, and at last that all his children were crushed to death and buried under the ruins of a house where they were eating together. In the midst of so many heavy unforeseen strokes, so suddenly reiterated, and so capable of shaking a soul of the greatest fortitude, no complaint escaped him. Solely intent upon the duty of that precious moment, he submits to the decrees of providence: "Naked came I into the world, and naked shall I go out of it: the Lord gave, and the Lord hath taken away: blessed be the name of the Lord." He shows the same submission and constancy after Satan had struck him with biles all over his body, and ulcers to his very marrow, whilst he suffers the most acute pains. Does Job, in this condition, exhibit himself as a sight, or seek to attract admirers by a vain ostentation of courage? He is far from it. He confesses that his flesh is weak, and himself nothing but weakness. He does not dispute strength with God, and owns that of himself he has neither strength, counsel, nor resource. "Is my strength the strength of stones, or is my flesh of brass? Is there help in me? and is not wisdom driven quite from me?"⁹ This is not the language of Pagan philosophy, which is nothing but pride and vanity.

The Stoics made their sage a man absolutely perfect and void of passion, trouble, and defect. It was a vice with them to give the least sense of pity and compassion entrance into the heart. They deemed it the sign of a weak and even bad

mind: "*Miseratio est vitium pusilli animi, ad speciem alienorum malorum succidentis: itaque pessimo cuique familiarissima est.*"¹⁰ Compassion, continues the same Seneca, is a trouble and sadness of the mind, occasioned by the miseries of others: now the wise man is susceptible neither of trouble nor sadness.¹¹ His soul enjoys always a calm serenity, which no cloud can ever discompose. How can he be moved with the miseries of others, when he is not moved with his own. The Stoics reasoned in this manner, because they did not know what man is. They destroyed nature, while they pretended to reform it. They reduced their sage to an idol of brass or marble, in hopes to render him firm and constant in his own misfortunes and those of others. For they were for having him equally insensible in both, and that compassion should not make him consider that as a misfortune in his neighbour, which he ought to regard as indifferent in respect to himself. They did not know, that the sentiments they strove to extinguish, were part of the nature of man, and that to root out of his heart the compassion, tenderness, and warm concern with which nature itself inspires us for what happens to our neighbour, was to destroy all the ties of human and civil society.

The chimerical idea which they formed of the supreme perfection of their wise man, was the source whence flowed the ridiculous opinion they laid down, that all faults were equal. I have shown the absurdity of that maxim elsewhere.

They maintained another no less absurd, but much more dangerous, and which was a consequence of their opinion upon what constituted the supreme good of man; a just and solid opinion in some sense, but from which they made a bad inference. They pretended, that the supreme good of man ought not to be made to consist in any of those things of which he is capable of being divested against his will, and which are not in his power; but in virtue alone, which depends solely upon himself, and of which no foreign violence can deprive him.¹² It was very clear, that mankind could neither procure for themselves, nor preserve health, riches, and the other advantages of that nature: accordingly

⁹ Senec. de Clement. l. ii. c. 5.

¹⁰ *Misericordia est ægritudo animi, ob alienarum miseriorum speciem. Ægritudo autem in sapientem virum non cadit. Serena ejus mens est, nec, quidquam incidere potest quod illam obducatur. — Hoc sapienti ne in suis quidem accidit calamitatibus, sed omnem fortunæ iram reverberabit, et ante se franget.*

¹¹ *Hoc dabitur, ut opinor, si modo sit aliquid esse beatum, id oportere totum poni in potestate sapientie. Nam si amitti vita beata potest, beata esse non potest. De Finib. l. ii. n. 86.*

they implored the gods for the attainment and preservation of them. These advantages, therefore, could not compose part of the supreme good. Virtue alone had that privilege, because man is absolutely master of that, and derives it solely from himself. He gives it to himself, according to them, he preserves it himself, and has no occasion to have recourse to the gods for that, as for other good things. "Hoc quidem omnes mortales sic habent, externas commoditates — à diis se habere: virtutem autem nemo unquam acceptam deo retulit."¹ Never, said they, did any man take it into his head to thank the gods, that he was a good man, as he thanks them for riches, honours, and the health he enjoys. "Num quis, quod bonus vir esset, gratias diis egit unquam? at quod dives, quod honoratus, quod incolumis." In a word, it is the opinion of all men, that we ought to ask God for the goods of fortune, but as to wisdom, we derive that only from ourselves. "Judicium hoc omnium mortalium est, fortunam à deo petendam, à se ipso sumendam esse sapientiam." They carried their frantic pride so high as to set their sage in this view above God; because God is virtuous and exempt from passion by the necessity of his nature, whereas their wise man is so by his own choice and will.²

I shall not stop here to observe to the reader, from what I have now said, and what preceded it, into what absurdities the most esteemed and respected sect among the ancients, and indeed in some sense the most worthy of esteem and respect, gave into. Behold what human wisdom is capable of, when abandoned to its own strength and lights, or rather its own impotence and darkness.

It remains for me to relate the opinion of the Peripatetics, concerning the supreme good of man.

SECT. III.

Opinion of the Peripatetics Concerning the Supreme Good.

If we may believe Cicero upon this head, the difference between the Stoics and the Peripatetics upon the question of the supreme good, consists less in things than words, and that the opinions of both amounted to the same sense at bottom. He often reproaches the Stoics with having introduced rather a new language, than new doctrines, into philosophy, that they might seem to vary from those who had preceded them; which reproach appears to have sufficient foundation.

Both the one and the other agreed as to the principle, upon which the supreme good of man ought to be founded, that is, to live according, or conformably, to nature: *Secundum naturam vivere*. The Peripatetics began by examining what the nature of man is, in order to laying down their principle well. Man, said they, is composed of body and soul: such is his nature. To render him perfectly happy it is necessary to procure him all the goods both of the body and the soul: that is to live according to nature, in which both sects agree the supreme good consists. In consequence, they reckoned health, riches, reputation, and the other advantages of that kind, in the number of goods; and in that of evils, sickness, poverty, ignominy, &c. leaving, however, an infinite distance between virtue and all other goods, and vice and all other evils. These goods which we place among those of the body, said they, make the felicity of man perfect, and render his life completely happy; but in such a manner that he is capable of being happy, though not so entirely without them.³

The Stoics thought very nearly the same, and gave these advantages and inconveniences of the body some weight, but they could not bear that they should be called goods and evils. If once, said they, pain were to be admitted an evil, it would follow that the wise man, when in pain, is not happy: for felicity is incompatible with a life wherein there is any evil. People do not reason so, replied the Peripatetics, in any other respect. An estate covered with fine corn in abundance does not cease to be deemed fertile, because it produces some few bad weeds. Some small losses with considerable gains, do not hinder commerce from being reckoned very advantageous. In every thing, the greater outweighs the less, and is the rule of judging. It is thus in respect to virtue. Put it into one scale, and the whole world into the other, virtue will always be infinitely the most weighty: a magnificent idea of virtue this!⁴

I should think it abusing the reader's patience, if I bestowed more time in refuting these subtleties, and bad chicanes of the Stoics. I only desire him to remember what I have observed from the beginning, that in this question concerning the supreme good of man, the philosophers, of whatever sect they were, considered that good only in respect to this life. The goods of eternity were either unknown, or indifferent to them.

³ Illa, quæ sunt à nobis bona corporis numerata, complent ea quidem beatissimam vitam, sed ita, ut sine illis possit beata vita existere. *De Finib.* l. v. n. 71.

⁴ *De Finib.* l. v. n. 91, 92.

⁵ Audebo—virtutis amplitudinem quasi in altera libræ lance ponere. Terram, mihi crede, ea lux et maria deprimet.

¹ *De Nat. Deor.* l. iii. n. 86—88.

² Est aliquid quo sapiens antecedit Deum. Ille nature beneficio non timet, suo sapiens. *Senec. Epist.* lili.

ARTICLE II.

Opinions of the Ancient Philosophers upon the Virtues and Duties of Life.

"Though philosophy," says Cicero,⁶ "be a region wherein there are no uncultivated lands, and though it is fertile and abundant from one end to the other, there is no part of it more rich than that which treats of the duties of life, and lays down rules and precepts for giving our manners a certain and constant tenor, and making us live according to the laws of reason and virtue." It is true that excellent maxims, and such as might make us blush, are to be found upon this head amongst the pagans. I shall repeat some of them from Plato and Cicero, confining myself more to the thoughts than expressions of the former.

The End of Government is to make the Governed Happy, in making them Virtuous.

The first care of every man charged with the government of others, (which includes all persons in general, whose function it is to command, kings, princes, generals, ministers, governors of provinces, magistrates, judges, and fathers of families :) the first care, I say, of whoever is in any kind of authority, is to lay down well the end he ought to propose to himself in the use of that authority.⁷ What is the end of a man charged with the government of a state?⁸ It is not, says Plato in more than one place, to render it rich, opulent, and powerful; to make it abound with gold and silver; to extend its dominion far and wide; to keep up great fleets and armies in it, and thereby render it superior to all others by sea and land. It is easy to perceive that Athens is intended here. He proposes something much greater and more solid to himself; that is, to make it happy by making it virtuous; and it can only be so by sincere piety and profound submission in regard to God.

When we speak, says he elsewhere,⁹ of a happy city or republic, we do not pretend to confine that felicity only to some individuals, its principal persons, nobility, and magistrates: we understand, that all the members of such city or republic are happy, each in their several conditions and degrees; and in this the essential duty of a person charged with the government of it consists. It is the same with a city or state, as with the human body.¹⁰ This comparison is entirely just, and abounds with con-

sequences. The body consists of the head and the members, among which members some are more noble, more conspicuous, and more necessary than others. Can the body be said to be in health, and good condition, when the least and meanest of the members is diseased and out of order? Between all the inhabitants of a city, there is a mutual relation of wants and assistance, that forms an admirable tie of dependance among them.¹¹ The prince, the magistrates, and the rich, have occasion for food, clothes, and lodging. What would they do, if there were not an inferior order of people to supply them with all these necessities? This providence has taken care of, says Plato, in establishing the different orders and conditions of men by the means of necessity. If all were rich, there would be neither husbandmen, masons, nor artificers: and if all poor, there would be no princes, magistrates, and generals of armies, to govern and defend the rest. It was this mutual dependance that formed states, and within the compass of the same walls assembled and united a multitude of men of different trades and occupations, all necessary to the public good, and of whom in consequence none ought to be neglected, and still less despised by him who governs. From this multiplicity of talents, conditions, trades, and employments, reduced in some measure to unity by this mutual communication and tendency to the same end, results an order, harmony, and concert of wonderful beauty, but which always supposes, that, for the perfection of the whole, it is necessary that each part should have its perfection and ornament. To return to the comparison of a city or state to the human body, the prince is as the head or soul of it;¹² the ministers, magistrates, generals of armies, and other officers appointed to execute his orders, are his eyes, arms, and feet. It is the prince, who is to animate them, put them in motion, and direct their actions. The head is the seat of the understanding; and it is the understanding that regulates the use of the senses, moves the members, and is watchful for their preservation, well-being, and health. Plato uses here the comparison of a pilot, in whose head alone lies the knowledge of steering the vessel, and to whose ability the safety of all on board is confided. How happy is a state, whose prince speaks and acts in this manner!

Whoever is charged with the care of others, ought to be firmly convinced, that he is designed for inferiors, and not inferiors for him.

To be convinced of this principle, we have only, in my opinion, to consult good sense,

⁶ Offic. l. iii. n. 3.

⁷ Plat. de Leg. l. xii. pp. 961, 963.

⁸ In Alcib. p. 134. De Legib. l. v. p. 742.

⁹ Ib. p. 420.

¹⁰ Ib. p. 964.

¹¹ De Rep. l. ii. pp. 369, 374.

¹² Ib. l. ii. p. 961—964.

right reason, and even common experience. It, however, seldom happens that superiors are truly convinced of it, and make it the rule of their conduct. Plato,¹ to set this principle in full light, begins by introducing one Thrasymachus into the dialogue, who pleads the cause, or rather makes the apology, of a corrupt government. This man pretends, that in every government, that ought to be considered as just, which is for the advantage of the government: that he who commands, and is in office, is not so for others, but for himself: that his will ought to be the rule of all under him: that if strict justice were to be observed, superiors of all men were the most to be pitied, having for their lot only the cares and anxieties of government, without being in a condition to advance their families, serve their friends, or comply with any recommendation, as they would be bound to act in all things according to the principles of exact and severe justice. There are few, or rather none, who talk in this manner: but too many reduce it to practice, and make it the rule of their conduct. Plato refutes at large all this wretched reasoning, and, according to his custom, makes use of comparisons taken from the common uses of life: I shall content myself here with the following single proof, to show that those who command are designed for their inferiors, and not their inferiors for those who command. A pilot takes upon himself the care of a ship with a great number of persons on board, whom different views and interests induce to go to a foreign country. Did it ever enter into the thoughts of any reasonable man to imagine, that the passengers were for the pilot, and not the pilot for the passengers? Would any one venture to say, that the sick whom a physician takes care of are for him? And is it not evident that physicians, as well as the art of physic, are intended solely for restoring health to the sick? Princes are often represented by the ancients under the idea of ποιμαίνων, *the shepherds of the people*. The shepherd is certainly for his flock, and nobody is so unreasonable to pretend, that the flock is for the shepherd.

It is from this doctrine of Plato, that the Roman orator borrowed the important maxim, which he strongly inculcates on Quintus Cicero his brother in the admirable letter, wherein he gives him advice for his good conduct in the government of Asia, which had been confided to his care. "As for me," says he, "I am convinced that the sole end and attention of those in authority ought to be, to render all under them as happy as possible—And not only," adds he, "those who govern

citizens and allies, but whoever has the care of slaves, and even of beasts, ought to procure them all the good and convenience they can, and make their advantage their whole care."²

The natural consequence of this principle, that all superiors, without exception, are established for the good of those under them, is, that their sole view in the use of their power and authority ought to be the public good.³ Hence also it follows, that only persons of worth should have great employments; that they should even enter upon them against their will; and that it should be necessary to use a kind of violence to oblige them to accept such offices. And indeed places, wherein nothing is to be seen but pains, labour, and difficulty, are not so desirable as to be sought or solicited. However, says Plato, nothing is more common in our days than to make interest for posts, and to pretend to the highest employments, without any other merit, than an ambition that knows no bounds, and a blind esteem for one's self: and this abuse it is, that occasions the misfortunes of states and kingdoms, and terminates at length in their ruin.

Justice and the faith of engagements are the foundations of society. Sanctity of oaths.

The firmest tie of society is justice, and the foundation of justice is fidelity to engagements, which faith consists in the inviolable observance of promises given, and treaties made.⁴

Injustice can assume only two different forms, of which the one resembles the fox, and is that of artifice and fraud; and the other the lion, which is that of violence.⁵ Both the one and the other are equally unworthy of man, and contrary to his nature: but the most odious and detestable is that of fraud and perfidy, especially when it covers the blackest practices with the appearance of probity.

All kinds of fraud and artifice should be banished from the intercourse of mankind, with that malignant cunning of address, that covers and adorns itself with the name of prudence, but which in reality is infinitely remote from it, and suits only double-dealing, dark, knavish, malicious, artificial, perfidious people: for all

² Ac mihi quidem videntur huc omnia esse referenda ab illis qui præsumunt alia, ut illi qui eorum in imperiis erant sint quàm beatissimæ—Est autem, non modò ejus qui sociis et civibus, sed etiam ejus qui servis, qui pecudibus præsit, eorum quibus præsit commodis utilitatisque servire. Cic. *Epist. l. ad Q. Frat.*

³ Plat. de Rep. l. i. p. 347. Ibid. l. vii. p. 560, 561.

⁴ Cic. *Offic. l. i. n. 30, 21.* ⁵ *Offic. l. i. n. 41.*

⁶ Quocirca astutiae tollendæ sunt, eaque malitia, quæ vult illa quidam se esse prudentiam, sed abest ab ea, distatque plurimum. *Lib. iii. n. 71.*

these odious and detestable names scarce suffice to express the character of such as renounce sincerity and truth in the intercourse of life.⁷ By what name then must we call those, who make a jest of the sanctity of oaths, which are solemn and religious affirmations, made in the presence, and before the eyes of God, whom we call to witness to them,⁸ whom we render in some measure the guarantee for their truth, and who will undoubtedly avenge the sacrilegious abuse of his name? The regard due to the divinity, could not, according to Plato,⁹ be carried too far in this respect. It was from this principle he desired that, in trials wherein only temporal interests were concerned, the judges should not require any oath from the parties, in order that they might not be tempted to take false ones, as it happens, says he, with more than half those who are obliged to swear; it being very uncommon and difficult for a man, when his estate, reputation, or life are at stake, to have so great a reverence for the name of God, as not to venture to take it in vain. This delicacy is remarkable in a Pagan, and well worth our serious reflection. Plato goes still farther. He declares,¹⁰ that not only to swear slightly, and without any important reason, but to use the name of God in familiar discourse and conversation, is to dishonour, and to be wanting in the respect due to the divine Majesty. He would therefore have been far from approving a custom, now very common even among persons of worth, of calling frequently upon the name of God, when nothing is less in question than religion.

Different duties of civil life. Fine maxims upon virtue.

Every one ought to consider the common good as the great end of his actions.¹¹ For should men know no good but private interest, and be for engrossing every thing to themselves, no kind of society could subsist among them. Every thing upon earth was created for the use of man, and men themselves were formed for one another, and for the aid of each other by reciprocal services. Hence we are not to believe, that we were born only for ourselves. Our country, our fathers, mothers, and friends, have a right to whatever we are, and it is our duty to procure them all the advantages in our power.

It is upon these principles of our duty to justice and society, that the Stoics determine many questions of moral philosophy in a manner, that condemns many christian casuists.

At the time of a famine, a merchant arrives first in a port laden with corn, followed by many others with the same freight.¹² Ought he to declare, that the rest will soon be there; or is it allowable for him to be silent about them, in order to make the better market for himself? The decision is, that he ought to declare it; because so the good of human society for which he is born requires.—A man receives bad money in payments.¹³ May he give it to others for good, knowing it to be counterfeit? He cannot, as an honest man.—Another sells an ingot of gold taking it for brass.¹⁴ Is the buyer obliged to tell the seller that it is gold, or may he take advantage of the other's ignorance, and buy that for a crown, which is perhaps worth a thousand? He cannot in conscience.

It is an indisputable maxim, says Plato, which ought to serve as a foundation for the whole conduct of civil life, that it is never allowable to hurt any one, nor consequently to return evil for evil, injury for injury, or to take revenge of our enemies, and to make the same misfortunes fall upon them, which they have made us suffer.¹⁵ And this is what right reason teaches us. But the Pagans are not steady upon this refined point of morality. "He is a good man," says Cicero, "who does all the good in his power, and hurts nobody, unless provoked by injury." *Virum bonum esse, qui prosit quibus possit; noceat nemini, nisi lacessitus injuria.*¹⁶

One of the laws of Plato's commonwealth is, that money should never be lent with usury.¹⁷ The goods of another are never to be appropriated to one's own use. "If I had found a treasure," says Plato, "I would not touch it, though the augurs upon being consulted should assure me that I might apply it to my own use. That treasure in our coffers, is not of so much value as the progress we make in virtue and justice, when we have the courage to despise it. Besides, if we appropriate it to our own use, it is a source of curses to our family." He judges in the same manner of a thing found in one's way.¹⁸

All other good things, without virtue, ought to be regarded as real evils.¹⁹ And this virtue is neither the gift of nature, the fruit of study, nor the growth of human wit, but an inestimable

⁷ Hoc genus est hominis versuti, obscuri, astuti fallacia, malitiosi, callidi, veneratoris, vafri. *Ibid.* n. 57.

⁸ Est jusjurandum affirmatio religiosa. Quod autem affirmat, quasi Deo teste, promissoria, id tenendum est. *Ibid.* n. 104.

⁹ De Leg. l. xii. p. 948, 949. 10 *Ib.* n. 917.

11 *Offic.* l. iii. n. 36.

12 *Offic.* n. 50, &c. 13 *Ib.* n. 91. 14 *Ib.* n. 92.

15 Ἀρχαίμωρα ἐνὶ τῷ βουλευμένῳ ὡς ἀδίκον ἐξ ὧν οὐκ ἐστὶν τοῦ ἀδικεῖν, οὐκ ἑκαστὸς πᾶσιν ἀφαιρῶν ἀνδραγαθίας κακῶς. *Plat. in Criton.* p. 49.

16 *Offic.* l. iii. n. 75.

17 De Legib. l. v. p. 742. l. xi. p. 913. 18 *Ib.* p. 914.

19 In Menex. p. 246. In Menon. p. 99.

blessing, which God confers on whom he pleases.¹

Contrast between a good man under a load of evils, and a wicked man in the highest affluence and good fortune.

Plato supposes two men, very different in the world's thoughts and treatment of them. The one consummately wicked, without either faith, probity, or honour, but wearing the mask of all these virtues; the other a perfectly good man, (according to the idea of the Pagans) who has no thoughts but to be, not to seem, just. The first, for the attainment of his ends, spares neither fraud, injustice, nor calumny, and reckons the greatest crimes as nothing, provided he can but conceal them.² With an appearance of religion, he affects to adore the gods with pomp and splendour, offering presents and sacrifices to them in greater number, and with more magnificence than any body. By this means deceiving the dim sight of men, that cannot pierce into the heart, he succeeds in heaping up riches, honours, esteem, reputation, powerful establishments, and multiplying advantageous marriages for himself and his children; in a word, whatever the most splendid fortune includes of most soothing and beneficial. The second, in a supreme degree the good man, simple, modest, reserved, solely intent upon his duty, inviolably attached to justice, far from being honoured and rewarded as he would deserve, (in which case, says Plato, it could not be discerned whether virtue itself, or the honours and rewards consequent upon it, were his motives) is universally in disgrace, blackened with the most odious calumnies, looked upon as the vilest of wretches, abandoned to the most cruel and ignominious treatment, "thrown into prison, scourged, wounded, and at last nailed to a cross;" while he chooses rather to undergo

the most cruel torments, than to renounce justice and innocence.³ Is there any one, cries Cicero, so stupid as to hesitate one moment, which of these two he would rather choose to resemble?

We are surprised to find sentiments so noble, so exalted, and so conformable to right reason and justice, among the Pagans. We should remember, that notwithstanding the general corruption and darkness which had overspread the Pagan world, the light of the eternal Word did not fail to shine out to a certain degree in their minds: "and the light shineth in darkness." It is that light, which discovers and makes known to them various truths, and the principles of the law of nature. It is that light, which writes it in their hearts, and gives them the discernment of many things just and unjust: which makes St. Augustine⁴ say, "Let the wicked see in the book of the light in what manner they ought to live." Now, when we see in Greece crowds of learned men, a people of philosophers, who succeed one another during four entire ages; who employ themselves solely in inquiring after truth; who most of them, for succeeding the better therein, renounce their fortunes, country, settlement, and all other employments except that of applying to the study of wisdom: can we believe so singular and even unexampled an event, which never happened in any other part or time of the world, the effect of chance, and that providence had neither any share in it, nor intended it for any end? It had not destined the philosophers to reform the errors of mankind. Those great men disputed four hundred years almost without agreeing upon, and concluding any thing. None of their schools undertook to prove the unity of the Godhead, none of them ever so much as thought of advancing the necessity of a Mediator. But how useful were their moral precepts upon the virtues and duties, in preventing the inundation of vice? What horrid disorders had taken place, had the Epicureans been the prevailing and only sect? How much did their inquiries contribute to the preservation of the important doctrines of the distinction between matter and mind, of the immortality of the soul, and the existence of a Supreme Being? Many of them had admirable principles upon all these points, "which God had made known unto them,"⁵ preferable to so many other people whom he left in barbarity and ignorance.

As this knowledge of theirs, and the virtuous actions consequent upon it, may be considered under a double point of view, it ought also to

1 Εἰ καλῶς ἐκτελέσῃς, ἀρετὴ ἀντὶ ἑνὸς φέρει ὄντι δίδασκεν. ἀλλὰ θύμα μοῖα παρὰ γινώσκου ὅτι τοῦ, εἰς ἀν παρὰ γινώσκου.

2 Quæro, si duo sint, quorum alter optimus vir, æquissimus, summa justitia, singulari fide; alter insignis sceleris et audacia: et, si in eo errore sit civitas, ut bonum illum virum, sceleratum, facinorosum, nefarium putet: contrā autem qui sit improbißimus, existimet esse summa probitate ac fide; proque hac opinione omnium civium, bonus ille vir vexitur, raptatur, manus ei denique auferantur, effundantur oculi, damnetur, vinciatur, uratur, exterminetur, egeat, postremò jure etiam optimo omnibus miserrimus esse videatur; contrā autem, ille improbus laudetur, colatur, ab omnibus diligatur; omnes ad eum honores, omnia imperia, omnes opes, omnes denique copie conferantur; vir denique optimus omnium existimatione, et dignissimus omni fortuna Judicetur: quis tandem erit tam demens, qui dubitet utrum se esse malit? Cic. *opud Lactant divin. Instit.* l. v. c. 12.

3 Οὐτοὶ διακρίματος ὁ δίκαιος μαρτυροῦνται, ἐπὶ δὲ ταῖς διδόνται, ἡλικυθόνται τῷ ἑρταλμῷ πλοῦτος, εἰς κακὰ πλοῦτος, ἀναγκασθὲν θάνατον. Id est, suspenditur.

4 John I. 5.

5 In libro lucia.

6 Rom. I. 12.

produce two quite different effects in us. If we consider it as an emanation of that eternal light, "which shineth even in darkness," who can doubt whether or not it be worthy of our esteem and admiration? But if we consider it in the principle whence it proceeded, and the abuse made of it by the Pagans, it cannot be praised without reserve and exception. It is by the same rule we are to judge of all that we read in profane history. The most shining actions of virtue which it relates, are always infinitely remote from pure and real virtue, because not directed to their principle, and having their root in cupidity, or pride and self-love. *Radicata est cupiditas : species potest esse bonorum factorum, verè opera bona esse non possunt.*⁷ The root is not judged by the branches, but the branches by the root. The blossoms and even fruit may seem like; but their root is highly different. *Noli attendere quod floret foris, sed quæ radix est interna.* Not what these actions have of real, but what is defective in them, ought to be condemned. It is not what they have, but what they want, that makes them vicious. And what they want is charity, that inestimable gift, of which the want cannot be supplied by any other, and which is not to be found out of the Christian church and the true religion. Accordingly we see, that none of the Pagans, who in other respects have laid down very fine rules of duty between man and man, have made the love of God the fundamental principle of their morality: none of them have taught the necessity of directing the actions of human probity to him. They knew the branches, but not the stem and trunk of moral perfection.

ARTICLE III.

Of Jurisprudence, or the Civil Law.

I annex the knowledge of laws to moral philosophy, of which it is a part, or at least to which it has a great relation. It is a subject of great extent, but I shall treat it very succinctly. The memoirs with which an able professor of law, Mr. Lorry, one of my very good friends, has supplied me, have been of great use to me.

By the knowledge of the law, I mean the knowledge of right, of laws in general. Every people have had their particular laws and legislators. Moses is the most ancient of them all: God himself dictated the laws it was his will that his people should observe. Mercurius Trismegistus among the Egyptians, Minos among the inhabitants of the Island of Crete, Pythagoras among the cities of Great Greece, Charondas and Zaleucus in the same country,

Lycurgus at Sparta, and Draco and Solon at Athens, are the most celebrated legislators of pagan antiquity. As I have spoken of them with sufficient extent in the course of this history, I proceed directly to the Romans.

The beginnings of the Roman civil law were confined. Under the kings, Rome had only a small number of laws, which were proposed at first by the senate, and afterwards confirmed in the assembly of the people. Papirius, who lived in the time of Tarquinius Priscus, was the first who collected the laws made by the kings into one body. That collection was called, from the name of its author, *Jus Papirianum*, the *Papirian law*.

The commonwealth, after having abolished the power of kings, retained their laws for some time: but they were afterwards expressly abolished by the Tribunitian law, in hatred to the name of kings. From that time it used an uncertain kind of Right till the twelve tables, which were prepared by the Decemviri, and composed out of the laws of Athens and the principal cities of Greece, into which deputies had been sent to collect such as they should judge the wisest and best adapted to a republican government. These laws were the foundation and source of the whole Roman civil law:⁸ and Cicero is not afraid to prefer them to all the writings and books of the philosophers, as well in respect to the weight of their authority, as the extent of the utility deducible from them.⁹

The brevity, and at the same time the severity, of the law of the twelve tables, made way for the interpretation of the learned, and the praetor's edicts. The first employed themselves in explaining their spirit and intention: the second in softening their rigour, and supplying what might have been omitted.

The laws, in process of time, having multiplied greatly, the study of them became absolutely necessary, and at the same time very difficult. Persons of birth, capacity, learning, and love for the public good, distinguished by the name of Civilians, applied wholly to this study. The young Romans, who designed to open themselves a way to the great offices of the commonwealth by the talent of eloquence, which was the first step to them, went to the houses of these civilians in order to acquire their

⁸ Qui nunc quoque in hoc immenso aliarum super alias accervatarum legum cumulo, sons omnis publici privatiqve est juris. *Lic. l. iii. n. 34.*

⁹ Fremant omnes licet, dicam quod sentio. Bibliothecas mehercule omnium philosophorum unus mihi videtur XII tabularum libellus si quis legum fontes et capita viderit, et auctoritatis pondere, et utilitatis ubertate superare. *De Orat. l. i. n. 105.*

first knowledge of the law, without which it was not possible for them to succeed at the bar. Private persons in all their affairs had recourse to them, and their houses were regarded as the oracles of the whole city, whence answers were brought, which determined doubts, calmed disputes, and directed the methods it was necessary to take in the prosecution of all suits.¹ These answers were no more than opinions, which might inform the judges, but imposed no necessity upon them of following them. Augustus was the first who gave them more authority, in appointing civilians himself, who were no longer limited to serve as counsel to individuals, but were held the emperor's officers. From that period, their opinions reduced to writing, and sealed with the public authority, had the force of laws, to which the emperors obliged the judges to conform. These civilians published various works under different titles, which have contributed exceedingly towards reducing the knowledge of the civil law into art and method.

These laws, in their turn, multiplied extremely, and made way for doubts and difficulties by contradictions supposed or real. In such cases recourse was had to the prince, who gave the solution of them. He adjudged also by decrees the causes referred to him by appeal, and answered by rescripts all the consultations addressed to him by petition or memorial. And thence partly came the Constitutions of the Emperors, so full of wisdom and equity, from which the body of the Roman or civil law has been formed.

To form these decisions with the greater maturity, they called in the assistance of the most learned civilians, and did not give their answers, till after having concerted them well with all the persons in the empire who were best versed in the laws and rights of the public.

I shall say a few words in this place upon the most celebrated civil lawyers of the latter times.

Papinian (*Æmilius*) was held in great estimation by the emperor Severus, whom he had succeeded in the office of fiscal advocate. He was looked upon as the asylum of the laws, and the repository of the whole knowledge of them. The emperor Valentinian III. raised him above all the civilians, in ordaining by his law of the 7th of November 426,* that when they were divided upon any point, they should follow the opinion espoused by that eminent genius, as he calls him. And indeed Cujas³ judges him to be the most profound civilian that ever was, or ever will be. The emperor Severus, being willing to raise his

great merit to equal dignity, made him *præfectus prætorio*, of which one of the principal functions was to judge causes jointly with the emperor, or in his name. Papinian, to acquit himself the better in that office, took Paulus and Ulpian for his counsellors and judges assistant, whose names are also very famous among the civilians.

Severus, at his death, left two sons, Caracalla and Geta. Though they had both the name, Dion⁴ assures us that only Caracalla had the power of emperor, who soon rid himself of his colleague in the most cruel and barbarous manner conceivable; for he caused him to be assassinated in the arms of their common mother, and, according to some, killed him with his own hands.

Caracalla murdered all whom his brother had loved, and who had either served or retained to him, without distinction of age, sex, or quality; and Dion says, that he began with twenty thousand of his domestics and soldiers.⁵ To mention or write the name of Geta sufficed for being immediately butchered; so that the poets dared not use it even in comedies, where it was commonly given to slaves.

Papinian could not escape his cruelty. It is said, that Caracalla would have obliged him to compose a discourse to excuse the death of Geta either to the senate or people, and that he generously replied: "It is not so easy to excuse, as to commit parricide;" and, "To accuse an innocent person, after having deprived him of his life, is a second parricide." He remembered without doubt, that Seneca had been very much blamed, for having composed a letter for Nero to the senate, to justify the assassination of his mother.⁶ The son of Papinian, who was then *questor*, and had three days before exhibited magnificent games, was also killed.

Fabius Sabinus. The emperor Heliogabalus (A. D. 221,) having ordered a centurion to go and kill Sabinus, that officer, who was a little deaf, believed that he had bade him make Sabinus quit the city. The centurion's error saved the life of Sabinus who passed for the Cato of his times. The emperor Alexander, who succeeded Heliogabalus, A. D. 222, placed him in the number of those next his person, and whose counsel he took for governing wisely.

Ulpian (*Domitius Ulpianus*) descended originally from the city of Tyre. He had been counsellor, and judge assistant to Papinian, in the time of Severus. When Alexander came to the empire, he placed him near his person, in quality of counsellor of state, and to take care of all things referred to his judgment,⁷ which employment is evidently that since called great referendary. He afterwards made him *præfectus prætorio*.

¹ Est sine dubio domus Juriaconsulti totius oraculum civitatis, "unde cives sibi consilium expetant suarum rerum incerti: quos ego (it is Crasus that speaks) mea ope ex incertis certos compotesque consilii dimitto, ut ne res temerè tractent turbidas." *De Orat.* l. i. n. 190, 200.

² Cod. Th. l. t. & l. l.

³ Cuj. in Cod. Th.

⁴ Dio. l. lxxvii. p. 670, &c.
⁶ Tacit. Annal. l. xiv. c. 11.

⁵ Cæsarieni.
⁷ Scriniorum magister.

Lampridius* places him at the head of those wise, learned, and faithful persons, who composed Alexander's council, and assures us that prince paid him greater deference than any body else, upon account of his extraordinary love of justice; that he conversed only with him in private; that he looked upon him as his tutor: and that he proved an excellent emperor, from making great use of Ulpian's counsels in the government of the empire.

As Ulpian endeavoured to re-establish discipline amongst the Prætorian soldiers, they rose against him, and demanded his death of Alexander. Instead of granting their request, he often covered him with his purple robe, to defend him against the effects of their fury. At length, having attacked him in the night, he was obliged to fly to the palace to implore the aid of Alexander and Mammæa. But all the awe of the imperial authority could not save him, and he was killed by the soldiers even in the sight of Alexander. Several of Ulpian's works are still extant.

Paulus (*Julius Paulus*) was of Padua, where his statue is still to be seen.⁸ He was nominated consul under Alexander, and then *præfectus prætorio*. He, as well as Sabinus and Ulpian, was of the council formed by Mammæa the mother, and Mæsa the grandmother, of Alexander, to administer the public affairs during the minority of that prince. Every body knows the great services they did, and the reputation they acquired him. The Roman empire had at that time every thing that could render a state happy, a very good prince, and excellent ministers: for the one is of small utility without the other; and perhaps it is even more dangerous to the people, to have a prince good of himself, but who suffers himself to be deceived by bad men, than to have one more wicked, who however inspects into the conduct of his officers, and obliges them to do their duty. Alexander always set great value upon the merit of Paulus, who is said to have written more than any other civilian.

Pomponius was also of Alexander's court and council. How happy was this reign! As he lived to the age of seventy-eight, he composed a great number of works. Among the rest, he made a collection of all the famous civilians down to the time of the emperor Julian.

Modestinus (*Herennius*) lived also in the reign of Alexander, who raised him to the consulship. He, as well as the four preceding lawyers, was Papinian's disciple, whose care formed them all in the knowledge of the civil law. What services does a single man sometimes render a state by his learning and pupils!

Tribonian was of Pamphilia. He was hon-

oured with the first employments at Constantinople by the emperor Justinian. It was under that prince, and by his care, that the civil law took a new form, and was reduced into an order, that still exists, and will for ever do him honour.

Before him, there were many *Codes*, which were either compiled from, or abridgments of, the Roman laws. Gregorius and Hermogenes, two civilians, made a collection of laws, which from their names was called *The Gregorian and Hermogenian Code*. It was a collection of the Constitutions of the emperors, from Adrian down to Dioclesian and Maximin in 306. This work was of no use, for want of authority to cause it to be observed. The emperor Theodosius the younger was the first who composed a *Code* in sixteen books, consisting of the Constitutions of the emperors from Constantine the Great down to him; and he abrogated all laws not comprised in this system. This is called *the Theodosian Code*, and was published in 438. And lastly, the emperor Justinian, seeing the authority of the Roman law much weakened in the West, from the decline of the empire, resolved to cause the whole body of the Roman law to be compiled anew. He charged Tribonian with this commission, who called in the aid of the most learned civilians then in being. He chose the finest of the Imperial Constitutions from Adrian down to his own time, and published this new *Code* in 529.

He afterwards undertook a new work by order of the emperor: this was to extract the best decisions from the two thousand volumes of the ancient civilians, and to reduce them into one body, which was published in 533, under the name of *the Digest*. The emperor gave this collection the force of law by the letter which he placed in front of the work, and which serves it for a preface. It is called also *the Pandect*. The Digest consists of fifty books. The same year appeared the *Institutes* of Justinian, a book which contains the elements and principles of the Roman or civil law. The year following, that is to say in 534, the emperor made some alterations in his first Code, which he abolished, and substituted a new one in its stead, to which alone he gave the authority of law. And lastly, after this revival, Justinian published a hundred and sixty-five constitutions, and thirteen edicts, which are called *Novella*, *the Novels*, either because they make a considerable change in the ancient law; or, according to Cujas, because they were made upon new cases, and compiled after the revival of the Code by the order of that emperor. Most of the *Novels* were written in Greek, and were translated into Latin.

The body of the civil law therefore consists of four parts, the Code, the Digest, the *Institutes*, and the *Novels*. By the *Civil Law*, the *Insti-*

⁸ In Alex. vit.

⁹ Ibid.

tutes understand the laws peculiar to each city or people. But at present it is properly the Roman law, contained in the Institutes, the Digest, and the Code. It is otherwise called the *Written Law*.

From all that I have now said may be seen, what services a prince may render his people, who applies himself seriously to the cares of government, and who is well convinced of the extent and importance of his duties. Justinian had been very successful in the wars he had undertaken, and had the wisdom to ascribe that success neither to the number of his troops, the courage of his soldiers, the experience of his generals, nor his own talents and abilities; but solely to the protection with which God had vouchsafed to favour his arms.¹ But, had he contented himself with this military glory, he would have thought, that he had only half discharged the functions of sovereignty, which was principally established for rendering justice to the people in the name and place of God himself. Accordingly he declares expressly in a public edict, that the Imperial Majesty ought not to be adorned with arms only, but armed also with laws, for the good government of the people, as well in peace as in war.²

After, therefore, having restored peace to the provinces of the empire as a warrior, he turned his thoughts to the regulation of its polity as a legislator, by instituting an universal body of law, to serve as the rule of all tribunals: a work which had been much the object of the wishes of his predecessors, as he observes in more than one place, but which seemed attended with so many difficulties, that they had always believed it impracticable. He surmounted them all with a constancy, that nothing was capable of discouraging. For succeeding in this important enterprise he employed all the most learned civilians in the whole extent of the empire, presiding himself in the work, and revising exactly all they composed.³ Far from ascribing the honour of it to himself, as is usual enough, he does them all justice; he mentions them with praises, he extols their erudition, he treats them almost as his colleagues, and recommends it as a

duty, to thank the Divine Providence for having supplied him with such aids, and for having honoured his reign by the composition of a work so long desired, and so useful and necessary for the due administration of justice. An emperor, of less zeal for the public good, and less liberality, than Justinian, would have left all those civilians in obscurity and inaction. How many excellent talents of all kinds remain buried, for want of patrons to produce them! The learned are not wanting to princes, but princes to the learned. The great qualities and actions of Justinian would have recommended him for ever to the veneration of mankind, if his conduct in respect to ecclesiastical affairs had not sullied his glory.

I shall conclude this article upon the knowledge of civil law, with some extracts from laws, that may give the reader an idea of the beauty and solidity of the different institutions of which I have been speaking.

“*Digna vox est majestate regnantis, legibus alligatum se Principem profiteri: adeo de auctoritate juris nostra pendet auctoritas. Et, re vera, majus imperio est submittere legibus principatum; et oraculo presentis Edicti, quod nobis licere non patimur, aliis indicamus.*” “It is worthy of the majesty of a prince to declare himself bound and limited by the laws: so much does our authority depend on right and justice. And, indeed, to submit the sovereign power to the laws, is greater than to exercise it; wherefore we are well satisfied to make known to others by the present edict, what we do not think lawful for us to do.” It is an emperor, master of almost the universe, who speaks thus, and who is not afraid of hurting his authority, by declaring the just bounds by which it is limited.

“*Rescripta contra jus elicitā, ab omnibus Judicibus refutari præcipimus; nisi forte sit aliquid, quod non lædat alium, et prosit petenti, vel crimen supplicantibus indulgeat.*” “We ordain, that no judge shall have any regard to rescripts obtained from us contrary to justice, unless they tend towards granting some grace to petitioners not to the hurt of others, or towards remitting some punishment to supplicants.” It is very uncommon for princes either to own that they have deceived themselves, or been deceived by others, and to retract in consequence what they have once decreed. Nothing, however, does them more honour than such an acknowledgment, as we see in the example of Artaxerxes, who publicly revoked the unjust decree he had been misled into passing against the Jews.

“*Scire leges, non hoc est verba earum tenere, sed vim ac potestatem.*” “To know the laws, is not only to understand the words of which they are composed, but their force and efficacy.”

“*Non dubium est in legem committere eum,*

¹ Ita nostros animos Dei omnipotentis erigimus adiutorium, ut neque armis confidamus, neque nostris militibus, neque bellorum ducibus, vel nostro ingenio; sed omnem spem ad solam referamus summæ providentiæ trinitatis. *Epist. ad Trebon.*

² Imperatoriam majestatem non solum armis decoratam, sed etiam legibus oportet esse armatam, ut utrumque tempus, et bellorum et pacis, rectè possit gubernari. *Epist. ad cupidam legum juvenutem.*

³ Nostra quoque majestas semper investigando et perscrutando ea quæ ab his componebantur, quicquid dubium et incertum inveniebatur—emendabat, et in competentem formam redigebat. *Epist. ad senat. et omnes populos.*

qui verba legis amplexus, contra legis nititur voluntatem; nec penas insertas legibus evitabit, qui se contra juris sententiam sava prerogativa verborum fraudulenter excusat." "It is not to be doubted, but that he acts contrary to the law, who, confining himself to the letter, acts contrary to the spirit and intent of it; and whoever, to excuse himself, endeavours fraudulently to elude the true sense of a law by a rigorous attachment to the words of it, shall not escape its penalties by such prevarication."

"Nulla juris ratio, aut æquitatis benignitas patitur, ut, quæ salubriter pro utilitate hominum introducuntur, ea nos durior interpretatione contra ipsorum commodum producamus ad severitatem." "It is contrary to all justice and equity, that those things which have been wisely instituted for the good of mankind, should be wrested to their prejudice by a mistaken severity and a too rigid interpretation."

"Observandum est jus redditum, ut in adiendo quidem facilem se præbeat, sed contemni non patiatur. Unde mandatis adijcitur, ne in ulteriorem familiaritatem provinciales admittant: nam ex conversatione æquali contemptio dignitatis nascitur. Sed et in cognoscendo, neque excandescere adversus eos quos malos putat, neque precibus calamitosorum illachrymari oportet. Idem non est constantis et recti Judicis, cujus animi motum vultus detegit; et summam ita jus reddi debet, ut auctoritatem dignitatis ingenio suo augeat." "The person who administers justice ought indeed to be easy of access, but should not suffer himself to be despised by making himself too cheap. Hence it is, that in the instructions given to provincial governors and magistrates, it is recommended to them, not to admit the people of their provinces into too great a degree of familiarity, because conversing as equals induces contempt of dignity. In rendering justice, he ought also neither to express great indignation against such as he believes criminal, nor suffer himself to be softened too much by the prayers of the unfortunate. For it does not become the constancy and gravity of an upright judge, to discover the sentiments of his heart in his countenance: in a word, he ought to dispense justice in such a manner, as to exalt the authority of his office by the wisdom and moderation of his conduct."

"Quæ sub conditione jurisjurandi relinquuntur, à Prætoribus reprobantur. Providit enim is qui sub jurisjurandi conditione quid accipit, aut omitto conditionem perderet hereditatem legatimve, aut cogeretur turpiter, accipiendo conditionem, jurare. Voluit ergo eum, cui sub jurisjurandi conditione quid relictum est, ita capere, ut capiant hi, quibus nulla

talis jurisjurandi conditio inseritur: et rectè. Cum enim faciles sint nonnulli hominum ad jurandum contemptum religionis, alii perquam timidi metu divini Numinis usque ad superstitionem: ne vel hi, vel illi, aut consequerentur, aut perderent quod relictum est, Prætor consultissime intervenit." The tendency of this law is admirable. It dispenses with a person's taking an oath, to whom an estate or legacy has been left upon condition of taking such oath; and ordains, that he shall enjoy such estate or legacy, as if such condition had not been inserted, lest it should occasion him either to swear contrary to his conscience, or to renounce his right through an over-scrupulous, or superstitious delicacy of conscience. It were to be wished, that the spirit of this law should occasion the number of useless oaths to be abolished, which bad custom has introduced into all the trading societies and companies of France.

"Advocati, qui dirimunt ambigua fata causarum, sumque defensionis viribus in rebus sæpe publicis ac privatis lapsa erigunt, fatigata reparant, non minùs provident humano generi, quàm si præliis atque vulneribus patriam parentesque salvarent. Nec enim solos nostro Imperio militare credimus illos, qui gladiis, clypeis, et thoracibus nituntur, sed etiam advocatos. Militant namque patroni causarum, qui gloriosæ vocis confisi munimine, laborantium spem, vitam, ac posteros defendunt." "Advocates, who terminate causes, of which the events are always uncertain, and who by the force of their eloquence, whether in respect to the public, which often happens, or private persons, reinstate ruinous affairs, render no less service to mankind, than if they defended their country and parents in battle at the expense of their blood and wounds. For we rank in the number of those who fight for our empire, not only such as act for it with sword, harness, and shield, but those also who lend our subjects the noble aid of eloquence, in defence of their lives, interests, and posterity."

It is with reason that the prince bestows such fine praises on a profession, which makes so salutary an use of the talents of the mind, and that he equals it with whatever is greatest in the state. But at the same time he recommends to advocates the exercise of so illustrious a profession with a noble disinterestedness, and not to disgrace it by a base devotion to sordid interest. "Ut non ad turpe compendium stipemque deformem hæc arripiatur occasio, sed laudis per eam augmenta querantur. Nam si lucro pecunieque capiantur, veluti abjecti atque degeneres inter vilissimos numerabuntur." He also exhorts them not to abandon themselves to the inhuman itch and pleasure of bitter rallery and gross invective, which only lessen the weight of the advocate's discourse in the esteem

of his hearers ; but to confine themselves strictly to what the necessity and success of causes require. " Ante omnia autem universi advocati ita præbeant patrocinia jurgantibus, ut non ultra quam litum poscit utilitas, in licentiam convitiandi et maledicendi temeritate prorumpant. Agant quod causa desiderat, temperent ab injuria. Nam si quis adeo procax fuerit, ut non ratione sed probriis putet esse certandum, opinionis sue imminutionem patietur."

CHAPTER III.

Opinions of the Ancient Philosophers concerning the Metaphysics and Physics.

I have already observed that the Metaphysics were included in the Physics of the ancients. I shall examine four points in them. The existence and attributes of the Divinity ; the formation of the world ; the nature of the soul ; and the effects of nature.

ARTICLE I.

Of the Existence and Attributes of the Divinity.

The opinions of the ancient philosophers concerning the Divinity may be reduced to three principal points or questions. 1. Whether the Divinity exists? 2. What is his nature? 3. Whether he presides over the government of the world, and makes the affairs of mankind his care?

Before I enter into the chaos of philosophical opinions, it will not be improper to explain in few words the state of the belief of the whole world in respect to the Divinity, as the philosophers found it, when they first began to introduce their maxims upon this point by the sole method of reasoning ; and to slight the common and popular belief of all the nations of the universe, even to the most barbarous, which had supported itself in a constant and uniform manner by tradition alone.

Before the philosophers, the whole world agreed in believing in a Supreme Being, omnipresent, and attentive to the prayers of all who invoked his name in whatsoever condition they might be, in the midst of deserts, in the violence of storms at sea, and in the gloom of dungeons ; so good as to concern himself for the misfortunes of men, with power to deliver them out of them : the dispenser of victory, success, abundance, and every kind of prosperity : the arbiter of the seasons, and of the fecundity of man and beast : presiding at the conventions and treaties made either between kings or private persons : receiving their oaths, exacting the execution, and punishing with inexorable severity the least violation of them : giving or taking away

courage, presence of mind, expedients, good counsel, and attention and docility to wise advice : protecting the innocent, the weak, and the injured, and declaring himself the avenger of oppression, violence, and injustice : judging kings and nations, deciding their lot and destiny, and assigning with absolute power the extent and duration of kingdoms and empires. Such were part of the thoughts which men generally had of the Divinity, even in the midst of the darkness of paganism, which may serve as a summary of the ideas they had derived from an universal and perpetual tradition, undoubtedly as ancient as the world, upon this head. That this is true, we have incontestable proofs in the poems of Homer, the most venerable monument of pagan antiquity, and which may be considered as the archives of the religion of those remote times.

SECT. I.

Of the Existence of the Divinity.

The philosophers were much divided concerning different points of philosophy, but they all agreed in respect to the existence of the Divinity, except a very small number, of whom I shall soon speak. Though these philosophers, by their inquiries and disputes, added nothing fundamentally to what all nations believed before them upon this head, those inquiries and disputes cannot, however, be said to have been useless. They served to confirm mankind in their ancient belief, and to obviate the pernicious subtleties of those, who would attack it. The union of so many persons generally esteemed for the solidity of their sense, their indefatigable application to study, and the vast extent of their knowledge, added new weight to the common and anciently received opinion concerning the existence of the Divinity. The philosophers supported this opinion with many proofs, some more subtle and abstract, and others more popular and obvious to the understanding of the vulgar. I shall content myself with pointing out some few of the latter kind.

The constant and general concurrence of men of all ages and countries in the firm belief of the existence of the Divinity, seemed to them an argument to which it was impossible to object any thing with sense or reason. The opinions that have no other foundation but vulgar error and credulous prejudice, may indeed continue for some time, and prevail in certain countries : but sooner or later they give way, and lose all belief. Epicurus¹ founded the proof of the

¹ Epicurus solus vidit primum esse deos, quid in omnium animis eorum notionem impressisset ipsa natura. Quæ et enim gens, aut quod genus hominum, quod non

existence of the gods, upon nature's having stamped the idea of them on every mind. Without the idea of a thing, said he, we can neither conceive, speak of, nor dispute about it. Now what people, what kind of men, have not an idea, a notion of gods, independently of all learning? That is not an opinion derived from education, custom, or any human law; but the firm and unanimous belief of all mankind: it is therefore from notions implanted in our souls, or rather innate, that we conceive there are gods. Now all judgments of nature, when universal, are necessarily true.

Another argument, which the philosophers more frequently used, because evident to the most simple, is the contemplation of nature. The least practised in reasoning may at a single view discover him, who paints himself in all his works. The wisdom and power he has shown in all he has done, show themselves, as in a glass, to such as cannot contemplate him in his proper idea. This is an obvious and popular philosophy of which every man void of passion and prejudice is capable. The heavens, earth, stars, plants, animals, our bodies, our minds, all argue a mind superior to us that exists as the soul of the whole world. When we consider with some attention the frame and architecture of the universe, and the just proportion of all its parts, we discover at the first glance the traces of the divinity, or, in better terms, the seal of God himself impressed upon all things called the works of nature. "Can one," said Balbus,⁴ in the name of the Stoics, "behold heaven, and contemplate what passes there, without discerning with all possible evidence, that it is governed by a supreme divine intelligence? Whoever should doubt it, might as well doubt, whether there be a sun. The former is more visible than the latter. This conviction, without the evidence that attends it, would never have been so fixed and permanent: it would not have acquired new force by length of time; it would not have been able to resist the torrent of years, and to have passed through all ages down to us." "If there be," said Chrysippus,⁵ "things in the universe, that the wit, reason, strength, and power of man, are not capable of effecting, the Being that produces them is certainly better

than man. Now man could not form the heavens, nor any thing of what we see invariably regular. There is, however, nothing better than man, because he alone possesses reason, which is the most excellent thing he can possess. In consequence, the Being that made the universe is better than man. Wherefore then should we not say, that Being is a God?" To what blindness, or more properly, to what excess of stupidity must men have been abandoned, who could choose to attribute such stupendous and inconceivable effects to mere chance, and a fortuitous concourse of atoms, rather than to the infinite wisdom and power of God? "Is it not amazing," cries Balbus,⁴ in speaking of Democritus, "that there ever should be a man, who could persuade himself, that certain solid and individual bodies set themselves in motion by their natural weight, and that from their fortuitous concourse a world of such great beauty was formed? Whoever believes this possible, might as well believe, that if a great number of characters of gold, or any other substances, representing the twenty-one letters,⁶ were thrown upon the ground, they might fall disposed in such order, as to form the annals of Ennius legibly." The same thing may be said of Homer's Iliad. Who could believe, says the archbishop of Cambray, in his admirable treatise upon the existence of God, that a poem so perfect was not composed by the efforts of a great poet's genius; but that the characters of the alphabet having been thrown in confusion, a cast of mere chance, like one of dice, disposed all the letters exactly in the order necessary for describing so many great events in verses full of harmony and variety; for placing and connecting them all so well together; for painting each object in the most graceful, most noble, and most affecting colours conceivable; and, lastly, for making each person speak according to his character in so natural and pathetic a manner? Let a man reason and subtilize ever so long, he will never persuade a person of sense, that the Iliad had no other author but chance. Wherefore then should this man of sense believe of the universe, which without doubt is still more wonderful than the Iliad, what his reason would never permit him to believe of that poem?

In this manner all the most famous sects explained themselves. Some philosophers, as I have said before, but very few, undertook to

habeat sine doctrina anticipationem quandam deorum? quam appellat *πρόληψιν* Epicurus, id est anteceptam animo quandam informationem, sine qua nec intelligi quidquam, nec queri, nec disputari possit—Cum ergo non instituo aliquo, aut more, aut lege sit opinio constituta, maneatque ad unum omnium firma consensio, intelligi necesse est esse deos: quoniam inasitas eorum, vel potius innatas cognitiones habemus. De quo autem omnium natura consentit, id verum esse necesse est. *Ibid.* l. i. n. 43, 44.

2 De Nat. Deor. l. ii. n. 4, 5.

3 *Ibid.* l. ii. n. 16.

4 *Ibid.* l. ii. n. 63.

5 The president Boucher, in his learned dissertation, *De præcis Græcor. et Latin. literis*, printed at the end of Montfaucon's *Antiquities*, has shown, that the ancient Romans had only these sixteen letters: A, B, C, D, E, F, I, K, L, M, N, O, P, R, S, T. The five others, added in the time of Cicero, were G, Q, U, X, Z, without reckoning H, which was less a letter, than a note of aspiration.

distinguish themselves from the rest by peculiar opinions upon this subject. Abandoned to the feeble force of reason, in their attempts to fathom the nature and essence of the Divinity, and to explain his attributes, and without doubt dazzled with the lustre of an object, of which the human eye cannot sustain the radiance, they lost themselves in their inquiries, and from doubting at first the existence of the Divinity, proceeded so far by degrees as to deny it. But the people, who did not enter into these philosophical subtleties and refinements, and adhered solely to immemorial tradition, and the natural notion implanted in the hearts of all men, rose up vigorously against these teachers of atheism, and treated them as the enemies of mankind.

PROTAGORAS¹ having begun one of his books with these words: "I neither know whether there are gods, nor what they are;" the Athenians banished him not only from their city, but their territory, and caused his works to be publicly burned.

DIAGORAS did not confine himself to doubting: he plainly denied that there were gods; which occasioned his being surnamed the *Atheist*. He lived in the 91st Olympiad, A. M. 3568. It is said that the fondness of an author, an excessive tenderness for one of his productions, drew him into impiety.² He had prosecuted a poet for stealing a composition of his in verse. The latter swore he had robbed him of nothing; and soon after published that work in his own name, which acquired him great reputation. Diagoras seeing his adversary's crime not only unpunished, but honoured and rewarded, concluded that there was no providence and no gods, and wrote books to prove it. The Athenians cited him to give an account of his doctrine; but he fled, upon which they set a price upon his head. They caused a talent (about £150 sterling) to be promised by sound of trumpet, to whoever should kill him, and two to such as should bring him alive, and caused that decree to be engraved upon a pillar of brass.

THEODORUS of Cyrene denied also the existence of gods without restriction, A. M. 3684.³ He would have been brought to the tribunal of the Areopagus, if Demetrius Phalereus, who at that time ruled every thing at Athens, had not favoured his escape. His moral tenets were worthy of an atheist. He taught that all things are indifferent, and that there is nothing in its own nature either vice or virtue. His impiety drew him into trouble wherever he went, and he was at last condemned to poison himself.

The just severity of the Athenians, who

punished even doubting upon this head, as we have seen in the case of Protagoras, highly contributed to put a stop to the licentiousness of opinions, and the progress of impiety.⁴ The Stoics carried their respect for religion so far in this point, that they treated the custom of disputing against the existence of the gods as criminal and impious, whether it was done seriously, or merely for the sake of conversation, and against one's opinion.⁵

SECT. II.

Of the Nature of the Divinity.

A brief enumeration of all the chimeras advanced by the philosophers upon this subject, will convince us better than any other arguments of the incapacity of human reason to attain to such sublime truths by its own strength. I shall extract this detail from Cicero's books upon the nature of the gods. The remarks and reflections with which the Abbé Olivet of the French Academy has interspersed his excellent translation of these books of Cicero, will be great helps to me, and I shall scarce do more than copy and abridge them.

As the ancient philosophers studied the nature of the gods only with relation to sensible things, whose origin and formation they endeavoured to comprehend, and as the different manners, in which they disposed the system of the universe, occasioned their different beliefs concerning the Divinity, we must not be surprised to find these two subjects often united and confounded in this place.

THALES of Miletus said, "That water was the principle of all things, and that God is that intelligence, by whom all things are formed out of water."⁶ He spoke of an intelligence, that making only one whole with matter directed its operations; in the same manner as the soul, which united with the body makes only one and the same man, is said to direct the actions of man.

ANAXIMANDER believed, "That the gods receive being, that they are born and die at remote periods of time, and that they are innumerable worlds." These gods of Anaximander were the stars.⁷

ANAXIMENES affirmed, "That the air is god, that it is produced, that it is immense and infinite, and that it is always in motion."⁸ This

¹ De Nat. Deor. l. i. n. 63.

² Heeych. in *Διαγόρας*.

³ Diog. Laert. l. ii. in *Aristip.*

⁴ Ex quo equidem existimo, tardiores ad hanc sententiam profitendam multos esse factos, quippe cum pernam ne dubitatio quidem effugere potuisset. De Nat. Deor. l. i. n. 63.

⁵ Mala et impia consuetudo est contra deos disputandi, sive animo id fit sive simulatè. *Ibid.* l. ii. n. 108.

⁶ De Nat. Deor. l. i. n. 25. ⁷ *Ibid.* ⁸ *Ibid.* n. 26.

opinion of Anaximenes, at bottom, differs in nothing from those that precede it. He retained the idea of a sole, and infinitely extended, substance from his master Anaximander: but he called it air, as Thales had called it water.

ANAXAGORAS, the pupil of Anaximenes, was the author of this opinion, "That the system and order of the universe were to be attributed to the power and wisdom of an infinite mind."⁹ Anaxagoras lived only in an age after Thales. The notions of philosophy began to clear up. The necessity of an efficient cause, substantially distinct from the material one, was perceived. But to this infinite mind he attributes only the order and motion, not the creation, of the universe. The co-eternity of the two principles independent of each other, as to their existence, is the rock, on which he with all the ancient philosophers split.

PYTHAGORAS believed, "That God is a soul diffused throughout all the beings of nature, and from which the souls of men are derived."¹⁰ Virgil has admirably described the doctrine of this philosopher.—

Esse apibus partem divinæ mentis, et haustus
Æthereos dixere: deum namque ire per omnes
Terrasque, tractusque maris, cœlumque profundum.
Hinc pecudes, armenta, viros, genus omne ferarum
Quemque sibi tenues nascentem arcescere vitas.

Georg. l. iv.

Pythagoras lived at least fifty years before Anaxagoras. The latter, therefore, is not the first who had the idea of a pure spirit; or Pythagoras must be said to have confounded it with matter.

XENOPHANES said, "That God is an infinite whole, to which he adds an intelligence."¹¹ The same philosopher says elsewhere, "That God is an eternal substance—and of a round figure," by which he understands the world.¹² He, therefore, believed this God material.

PARMENIDES did not differ in his opinions with his master Xenophanes, though he expressed himself in different terms.¹³

EMPEDOCLES. According to him, "The four elements, of which he affirms all things to be composed, are divine," that is to say, gods.¹⁴ It is, however, manifest, that they are mixed, that they have a beginning and perish, and that they are void of thought.

DEMOCRITUS "gives the quality of gods as well to the images of sensible objects, as to nature which supplies these images, and to our knowledge and understanding."¹⁵ What he called gods,

were atoms. To speak properly, he believed nothing. "I deny," said he, "that we either know any thing, or nothing. I deny that we know even whether we know that." I deny that we know whether any thing exists, or whether nothing exists." A worthy member of the Eleatic sect, whose favourite maxim was the *Acatalepsy*, or the absolute incomprehensibility of all things. This sect, which acknowledged Xenophanes for its founder, formed the unbelieving Protagoras, and gave birth to that of Pyrrho.

PLATO. It appears from all his works, that he had very just thoughts of the Divinity, but that he was afraid to explain himself freely in a city, and at a time, wherein it was dangerous to clash with the prevailing opinions. In the *Timæus* he says, "that the Father of the world could not be named;" and in his books *de Legibus*, "that we should not be curious to know properly what God is."¹⁶ He supposes him incorporeal. He attributes the formation of the universe to him:¹⁷ *Opificem ædificatoremque mundi*. He says also, "that the world, the heavens, the stars, the earth, souls, and those to whom the religion of our forefathers ascribes Divinity; all this," he says, "is God."¹⁸ Plato's opinion at bottom, notwithstanding the appearance of Polytheism, is, that there is but one most good and most perfect God, who made all things according to the idea of the best work possible.

ANTISTHENES says, "That there are many gods adored by the nations of the earth, but that there is but one natural God," that is to say, as Lactantius explains it, author of all nature.¹⁹

ARISTOTLE differs exceedingly with himself. Sometimes he affirms that the whole Divinity resides in intelligence,²¹ that is to say, in the intelligent principle, by which all thinking beings think. Sometimes, that the world is God. He afterwards discovers some other being, who is above the world, and who takes care to direct and preserve its motion. He elsewhere teaches that God is nothing else, but the fire that shines in the heavens.

XENOCRATES says, "that there are eight gods. The planets are five of them, and all the fixed stars together, as so many scattered members of the same body, make but one. The sun is the seventh; and last of all, the moon the eighth."²²

THEOPHRASTUS in one passage attributes supreme Divinity to intelligence; in another to the heavens in general; and afterwards to the planets in particular.²³

9 De Nat. Deor. l. i. n. 26.

10 Ibid. n. 27.

11 Ibid. n. 28.

12 Acad. Quæst. l. iv. n. 118.

13 De Nat. Deor. l. i. n. 28.

14 Ibid. n. 29.

15 Ibid.

16 Acad. Quæst. l. iv. n. 73.

17 De Nat. Deor. l. i. n. 20.

18 Ibid. n. 18.

19 Ibid. n. 30.

20 Ibid. n. 32.

21 Instit. divin. l. i. n. 33.

De Nat. Deor. l. i. n. 33.

22 Ibid. n. 34.

23 Ibid. n. 35.

STRATO says, "that there is no other God but nature: and that nature is the principle of all productions and all mutations."¹

ZENO, the founder of the famous sect of the Stoics. We ought to expect something great concerning the Divinity from him. The following is the sum of his theology, extracted principally from Cicero's second book *De Natura Deorum*, in which his opinions are explained with great extent:—That the four elements alone compose the whole universe: that these four elements make but one continued nature, without division: that absolutely no other substance exists, besides these four elements: that the source of intelligence, and of all souls, is the fire united in the ether, where its purity suffers no alteration, because the other elements do not mingle with it: that this intelligence, active, vital fire penetrates the whole universe: that as intelligence is its property distinctly from the other elements, it is deemed to operate all things: that it proceeds methodically to generation, that is to say, it produces all things, not blindly and by chance, but according to certain rules always the same: that being the soul of the universe, it causes it to subsist, and governs it with wisdom, because it is the principle of all wisdom: that consequently it is God: that he gives the same denomination to Nature, with which it is one and the same, and to the Universe, of which it is part: that the sun, moon, and all the stars, as they are bodies of fire, are gods: that all things, wherein any singular efficacy resides, and wherein this active principle manifests itself clearly, deserve the name of divinities: that the same title ought also to be given to great men, in whose souls this divine fire brightens with uncommon lustre: and, lastly, that in whatsoever manner this soul of the universe is represented to us, and whatever names custom has given it in respect to the different parts it animates, religious worship is due to it.

I am tired with repeating so many absurdities, and the reader no doubt as much as me, if he has had patience enough to read them to the end. He ought not to expect to see living lights shine out from the darkness of paganism, upon a subject so infinitely superior to the weakness of human intellect, as the nature of the Divinity. The philosophers might indeed, by the pure strength of reason, have convinced themselves of the necessity and existence of a divine Being. Some of them, however, as Epicurus, have been suspected of concealing real atheism under the veil of specious words: at least they dishonoured the Divinity almost as much by the mean ideas they conceived of him, as they would have done,

had they absolutely denied him.² As to what regards the essence of the divine nature, they were all widely mistaken. And how should it have been otherwise, as men know no more of God, than he is pleased to reveal to them? The Abbé Olivet, in his dissertation upon the theology of the philosophers, reduces their sentiments to three general systems, which include all the particular opinions given us by Cicero in his books upon the nature of the gods. The different manner, in which these philosophers disposed the system of the universe, occasioned their different beliefs concerning the Divinity.

Some of them believed, that mere matter alone, without thought or reason, was capable of forming the world: whether one of the elements produced all the rest by different degrees of rarefaction and condensation, as it appears Anaximenes believed; or that matter, being divided into an infinity of moving corpuscles, those corpuscles assumed regular forms in consequence of fluttering accidentally to and fro in the void, as Epicurus believed; or that all the parts of matter had an intrinsic gravity, which gave them a necessary direction, according to Strato's opinion. Now the atheism of these philosophers is manifestly of the greatest kind, because they acknowledge no other first cause but inanimate matter.

Others rose to this notion; that the order of the world was too exquisite not to be the effect of an Intelligent Cause.³ But not conceiving any thing immaterial, they believed Intelligence a part of matter, and ascribed that perfection to the fire of the ether, which they considered as the ocean of all souls. This was the opinion of the Stoics; with whom may be joined Thales, and even Pythagoras, Xenophanes, Parmenides, and Democritus, who admitted, as well as they, an universal intelligent matter.

And, lastly, others comprehended, that intelligence could not be material, and that it was necessary to distinguish it absolutely from whatever is corporeal. But at the same time they believed, that bodies existed independently of that intelligence, and that its power extended no farther than to dispose them in order, and to animate them. This was the opinion of Anaxagoras and Plato: an opinion much less imperfect than that of the others, as it includes the idea of spirit, and really distinguishes the cause from the effect, the agent from matter; but still infinitely remote from truth.

As to the two other classes of philosophers, who admitted no principles but such as were

² Nonnullis videtur Epicurus, ne in offensum Atheniensium caderet, verbis reliquisse deos, re sustinisse. *De Nat. Deor. Lib. i. n. 85.*

³ *De Nat. Deor. l. ii. n. 28.*

¹ *De Nat. Deor. l. i. n. 36.*

material, they are absolutely inexcusable, and differ only in their blindness, as being more or less blind. What we read in the book of Wisdom may be well applied to them:—"Vain are all men by nature, who are ignorant of God, and could not out of the good things that are seen, know him that is: neither by considering the works, did they acknowledge the Work-master. But deemed either fire, or wind, or the swift air, or the circle of the stars, or the violent water, or the lights of heaven, to be the gods which govern the world."⁴

I speak here only of the gods peculiarly acknowledged as such by the philosophers. Varro distinguished three kinds of theologies. The fabulous, which was that of the poets: the natural, taught by the philosophers: and the civil or political, which was that established by the state, and in use among the people.⁵ The first and the last either ascribed, or suffered to be ascribed to the gods, all the passions and vices of men, and the most abominable crimes. The second seemed less void of reason, but at bottom was scarce any thing more religious, and included absurdities that disgrace human understanding.

Cicero⁶ in his third book upon the nature of the gods, sets all these absurdities in their full light. He did not know enough to establish true religion; but he knew enough to refute the Stoics and Epicureans, the only persons that rose up against St. Paul, when he preached at Athens. The mere light of nature might suffice him for subverting falsehood, but could not guide him to the discovery of the truth. We here discern the weakness of human reason, and the vain efforts that it makes alone, to raise itself up to the exact knowledge of a God truly hidden, and who dwells in inaccessible light.⁷ What progress in this respect has this proud reason been capable of making, during above four ages, in the best heads of Greece, in the most illustrious of the pagans for their learning, and the chiefs of their most famous schools? There is nothing so absurd, that has not been advanced by some philosopher.⁸

And farther. Such of them as professed a higher degree of wisdom, and to whom God

had manifested his unity, did they not keep this knowledge a secret through an ungrateful and abject cowardice? Did one of them rise up against the impiety, which had substituted mute idols, and figures not only of men, but of beasts and reptiles, to the true and living God? Did one of them refrain from going to the temples, though he did not approve in his heart of the superstitious worship, which he authorized by his presence and example?⁹ The only one, whose religion was put to the trial, did he not treat those, who accused him of not adoring the gods worshipped by the Athenians, as false accusers?¹⁰ His apologist,¹¹ who was also his disciple and friend, does he defend him in any other manner, than by affirming, that he always acknowledged the same divinities as the people? And is not Plato himself obliged to own, that this mean prevaricator ordered an impious sacrifice, even when certain of immediate death? A small extract from one of Plato's letters¹² shows us how much he was afraid to explain himself upon the nature and unity of God, and in consequence how far he was from rendering him thanks, from confessing him before men, and from exposing himself to the least danger in bearing witness of him. The shameful actions attributed to the false gods made him blush: but he contented himself with saying, that either they were not guilty of those crimes, or were not gods if they had committed them; without daring to say, that there was but one God, and without having the courage to rise up against the public worship, founded upon the very crimes he considered with horror.¹³

It must be said, to the shame of paganism, and the glory of the gospel, that a child among us, with the least instruction in the catechism, is more certain and more knowing in respect to every thing necessary for us to know of the divinity, than all the philosophers together.

SECT. III.

Whether the Divinity presides over the government of the world? Whether mankind be his peculiar care?

The dispute of the ancient philosophers concerning providence was, whether the gods presided in the government of the world in general, and whether they descended to a particular care of every individual of mankind. Epicurus was almost the only one who denied this truth.

"It is asked,"¹⁴ said he, "in what manner

9 Scholast. habebant privatas, et templa communia.—S. August.

10 Socrates.

11 Xenophon.

12 Epist. Plat. ad Dion. 13 Plat. de Repub. l. III.

14 De Nat. Deor. l. I. n. 51, 54.

4 Wisd. xlii. 1, 2.

5 S. August. de Civit. Dei, l. vi. c. 5.

6 Tullius, tertio de natura deorum libro, dissolvit publicas religiones: sed tamen veram, quam ignorabat, nec ipse, nec alius quisquam potuit inducere. Adeo et ipse certatus est falsum quidem apparere, veritatem tamen latere.—Lactant. de ira Dei, c. 11.

7 Verily thou art a God that hidest thyself, O God of Israel the Saviour, Isa. lxxv. 15. Dwelling in the light, which no man can approach unto, 1 Tim. vi. 15.

8 Nescio quomodo nihil tam absurdè dici posset, quod non dicitur ab aliquo philosophorum.—Cic. Divin. l. II. n. 12.

do the gods live, and how do they employ themselves? Their life is the most happy, and the most delicious imaginable. A god does nothing: he disturbs himself with no kind of care: he undertakes nothing. His wisdom and virtue form his joy. The pleasures he tastes, pleasures that can admit of no increase, he is sure of enjoying for ever." "This," continues he, addressing himself to Balbus, who sustained the opinion of the Stoics, "this is a happy god. But as for yours, he is overwhelmed with cares and labour. For, if you believe, that this god is the world itself, turning incessantly as it does round the axis of the heavens, and that too with surprising rapidity, is it possible for him to have a moment's rest?"¹ Now, without rest, there is no felicity. To pretend that there is a God in the world who governs it, who presides over the course of the stars, and the revolutions of the seasons, who regulates and disposes all things, who has his eye upon the land and sea, who makes the lives of men his concern, and who provides for their wants; all this is certainly giving him very severe and laborious employments.² Now to be happy, according to us, it is necessary to possess tranquillity of mind, and to be entirely at leisure. Besides, you set an eternal master over our heads, of whom we are to be day and night continually in dread.³ For how is it possible not to fear a God, who foresees all things, whose thoughts extend to all things, who observes all things, who believes all things relate to him, who interferes in all things, and who is never without employment?" The great maxim of Epicurus was, therefore, "That a happy and immortal being had neither any thing to do himself, nor occasioned employment for others."⁴ So impious a doctrine, which openly denies providence, deserved an Epicurus for its advocate and defender. And it must be owned, that what he says of a god who sees and knows all things, and who in consequence must punish whatever is contrary to the law of heaven, is the sole reason which to this day induces some persons to believe, there is no providence that watches over all the actions of men, or rather to desire it.

"It is not without reason that this doctrine occasioned Epicurus to be considered as a declared enemy of the gods, who undermined all religion, and who by his reasonings, as Xerxes

by his troops, levelled their temples and altars.⁵ "For, after all, what reason," says Cotta, "should oblige us to have any thoughts of the gods, since they have none of us, and absolutely neither take care of, nor do, any thing.—To be bound to express piety for them, would it not be necessary to have received graces from them? For wherein is a person obliged to those who have done nothing for him? Piety is a justice paid by man to the gods. Now as your gods have no relation to us, what can they require from us?"

The prayers made to the Divinity in distress and danger, the vows made to him for the attainment of certain graces, the promises and oaths of which he is taken for witness, uses common to all nations and practised in all times, show that mankind had always Providence in their thoughts. To consult only our own reason, such as sin has left it, that is to say, our pride and darkness, we should be tempted to believe, that it is not treating the Divinity with sufficient respect to make him descend thus to little circumstances, in representing to him all our wants; to stipulate conditions with him, if he vouchsafes to hear them; and to make him intervene in our transactions and engagements. God has thought fit by these different methods to preserve in the minds of all people a clear idea of his providence, of the care he takes of all mankind in particular, of the supreme authority that he retains over all the events of their lives, of his attention in examining whether they have faithfully kept their promises, and of the punishment he will inflict for the violation of them. And indeed we see that these truths have always been considered as the firmest foundations of human society. "Above all," says Cicero, in laying down rules for a wise government, we ought to be fully convinced, that the gods are the supreme lords and rulers of all things; that whatever passes in the universe, is directed by their will and power: that they delight in doing good to mankind; that they attentively examine what every one is, what he thinks, how he acts, and with what piety, and what sentiments, he practises the duties of religion: and lastly, that they make a great difference between the good and the wicked.⁶

This passage shows us, that the pagans not only attributed the universal government of the

¹ The system of the Stoics. ² Plato's system.

³ Itaque impossuistis in cervicibus nostris sempiternum dominum, quem dies et noctes timeremus. Quis enim non timeat omnia providentem, et cogitantem et animadvertentem, et omnia ad se pertinere putantem, curiosum et plenum negotii deum?

⁴ Quod æternum beatumque sit, id nec habere ipsum negotii quidquam, nec exhibere alteri.—*De Nat. Deor.* l. i. n. 45.

⁵ *De Nat. Deor.* l. i. n. 115, 116.

⁶ Sit igitur hoc jam à principio persuasum civibus, dominos esse omnium rerum ac moderatores deos; easque gerantur, eorum geri Judicio ac numine: eodemque optimè de genere hominum mereri; et, qualis quisque sit, quid agat, quid in se admittat, qua mente, qua pietate religiones colat, intueri; piorumque et impiorum habere rationem.—*De Leg.* l. ii. n. 15.

world to the Divinity,⁷ but were convinced, that he descended to the most minute particulars, and that not any of mankind, not an action, or even a thought, escaped his attention and knowledge. The Epicureans could not support the idea of a God so near, so attentive to them, and of such piercing sight. He is supremely happy, said they, and consequently enjoys infinite tranquillity. He is void of anger and passion. Every thing is indifferent to him, except repose. This is what persons abandoned to their pleasures are still fond of persuading themselves, in order to avoid the importunate reproaches of conscience. They are willing to allow in God a general care of his creatures, and a goodness like that of princes, who govern their dominions with wisdom, but who do not enter into particulars, nor descend to love their subjects, and distinguish any of them by their peculiar regard. David did not think in this manner. "The Lord looketh from heaven: he beholdeth all the sons of men. From the place of his habitation, he looketh upon all the inhabitants of the earth. He fashioneth their hearts alike: he considereth all their works."⁸ In beholding all mankind from heaven, he does not examine them with a general and confused view.⁹ Every individual is as present to him, as if he were attentive to no other object. He does not see him as from a great distance, but as immediately before his eyes. He does not consider only his outside, but penetrates into whatever is most secret and retired within him. He does not only interrogate his heart, but dwells in it, and is more present and intimate there, than the heart itself. In the infinite multitude of men, that have been and now are, nothing escapes either his sight or his remembrance. This knowledge and attention, which are as incomprehensible as his being, are natural effects of his being the Creator of all things, and of the heart as well as all the rest. "Who fashioneth their hearts,—who considereth all their works."

ARTICLE II.

Of the Formation of the World.

I shall not tire the reader a second time with a particular account in this place of the various systems of the ancient philosophers concerning the formation of the world, which vary infinitely, and are some more absurd than others. I shall scarce speak of any of them, except those of the Stoics and Epicureans, whose systems

upon this subject are most known and celebrated. It is not my design to enter very deeply into them, but to give only a general idea of them.

SECT. I.

System of the Stoics concerning the Formation of the World.

According to the Stoics, the intelligent part of nature only set the material and nonintelligent part of it in motion, which as well as itself had existed from all eternity. This appears very clearly from one passage of Cicero, not to mention many more. To obviate and remove the objections, that might be made against Providence, in respect to several things either useless or pernicious, with which the world abounds, the Stoics replied: "Nature has made the best use she could of the elements that existed."¹⁰ Could the pre-existence of matter be more expressly implied? Aristotle,¹¹ and many other philosophers, were also of the same opinion. What the Stoics called "the soul of the world,"¹² was that intelligence, that reason, which they believed diffused throughout nature. And what was this intelligent, sensitive, rational principle? Why, nothing but the ethereal fire, which penetrates all bodies: or rather nothing but mechanic laws, which they ascribed principally to the celestial fire, and according to which every thing was formed, and every thing acted necessarily. Accordingly Zeno defined nature, "a fire of subtle art, which proceeded methodically to generation."¹³ For he believed the action of creating and generating peculiar to art. Cicero uses the term create in this place, which might give reason to believe, that he knew and admitted the action of producing out of nothing, which is creation in the strict sense of the term. But he uses the same word in many other places to express a simple production; and none of his works give the least room to believe, that he had so singular a notion, as that of creation properly so called.¹⁴ As much may be said of all the ancients who have treated the physics,

⁷ Nec verò universo generi hominum solùm, sed etiam singulis à diis immortalibus consuli et provideri solet.—*De Nat. Deor.* l. ii. n. 163.

⁸ Psal. xxxiii. 13, 14.

⁹ Mr. Du Guet.

¹⁰ Ex his naturis quæ erant, quod effecit potuit optimum, effectum est. *De Nat. Deor.* l. ii. n. 86.

¹¹ Arist. *Physic.* l. viii.

¹² In natura sentiente ratio perfecta inest, quam vita animum dicunt esse mundi. *Acad. Quest.* l. i. n. 28, 29.

¹³ Zeno ita naturam definit, ut eam dicat "ignem esso artificiosum ad gignendum progredientem via." Censet enim artis maximè proprium esse creare et gignere. *De Nat. Deor.* l. ii. n. 57.

¹⁴ Natura fingit homines et creat imitatores et narratores facetos. 2. *De Orat.* n. 219.

Omnium rerum quas et creat natura et tuetur, summum bonum est in corpore. *De Finib.* l. v. n. 38.

Quæ in terris gignuntur, omnia ad usum hominum creantur. *Offic.* l. i. n. 22.

as Cicero expressly shows: *Erit aliquid quod ex nihilo oriatur, aut in nihilum subito occidat? Quis hoc physicus dixit unquam?*¹ It was a received principle with all the philosophers, that matter neither could be produced from, nor reduced to, nothing:

De nihilo nihil, in nihilum nil posse reverti.
Peri. Sat. 3.

Epicurus in express terms denies this power to the Divinity:

Nullam rem è nihilo gigni divinitus unquam.

Lactantius,² has preserved a fragment of Cicero's books *De Natura Deorum*, which cannot be applied with certainty to the system of the Stoics: because, as it is detached, it does not entirely appear of which sect of philosophers it is to be understood. However, it seems very proper to explain what they thought concerning the formation of the world. I shall insert it here at length. "It is not probable," says the speaker, "that matter, from which all things derived their origin, was itself formed by the divine Providence; but rather, that it has, and always had an intrinsic and natural force, which renders all its modifications possible to it."³ "As a workman therefore, when he works upon a building, does not produce the matter for it himself, but uses that which he finds ready made; and as he who forms a figure of wax, finds the wax produced to his hand: so the divine Providence must have had a matter, not that it had produced itself, but which it found in a manner at hand," and prepared for its designs. "That if God did not produce the first matter, it cannot be said that he produced either earth, air, fire, or water."

The comparison of the architect and the statuarius is entirely proper for explaining the system of the Stoics. Their god (whom Cicero calls the divine Providence in this place) and which is only the ether, as we have observed, did not create, or produce the matter of which the world is formed out of nothing; but he modified it, and, in disposing the parts of matter before in confusion, he made earth, air, water, and that gross fire which we know: that is to

say, he gave them the form and disposition in which we see them.

The workman, says Lactantius in the passage I have just cited, cannot build without wood, because he is not capable of producing it of himself; and of that he is incapable because he is man, or weakness itself.⁴ But God produces all that he pleases out of nothing, because he is God, or power itself, that knows neither measure nor bounds. For if he is not omnipotent, he is not God.

SECT. II.

System of the Epicureans concerning the Formation of the World.

In the system of the Epicureans (and the Stoics were of the same opinion in this point) these two words, *world and universe*, had a different signification.⁵ By the world they understood the heavens and the earth, and all they contained; and by the universe, not only the heavens and the earth with all they contain, but also the infinite void, which they supposed beyond the world. Far they believed the world full and limited, (or a limited plenum:) but they supposed it surrounded on all sides with an infinite, and absolutely void, space. Accordingly they divided all nature, the whole universe, into two parts: bodies and space, or void.⁶

Omnis ut est igitur per se Natura dualis
Consistit rebus, quæ Corpora sunt et Inane.

Lucrat. l. ii.

This distinction is necessary for understanding the system of the Epicureans. For they supposed, as a certain principle, that without the *vacuum*, there could not have been any motion or even production in the world.

Quæ, si non esset Inane,
Non tam sollicito motu privata carerent,
Quàm genita omnino nulla ratione fuissent:
Undique materies quoniam stipata fuisset.—*Ib.* l. i.

According to the Epicureans, the fortuitous concourse of atoms formed the world.

4 Faber sine ligno nihil edificabit, quia lignum ipsum facere non potest: non posse autem, imbecillitatis est humanæ. Deus vero facit sibi ipse materiam, quia potest; posse enim, Dei est: nam, si non potest, Deus non est. Homo facit ex eo quod est, quia per mortalitatem imbecillitas est; per imbecillitatem, definitæ ac modicæ potentia. Deus autem facit ex eo quod non est, quia per aternitatem fortis est, per fortitudinem potentatis immensæ, quæ sine ac modo caret sicut vita factoria. *Lactant.* *ibid.* c. 10.

5 Plut. de placit. Philo. l. ii. c. 1.

6 Sunt qui omnia Naturæ nomine appellant, ut Epicurus, qui ita dividit: Omnia, quæ secundum Naturam, esse Corpora et Inane. 2. *De Nat. Deor.* n. 82.

1 Lib. 2. de Divinit.

2 Lact. Div. Instit. l. ii. c. 8.

3 Non est probable, eam materiam rerum, unde orta sunt omnia, esse divina providentia effectam; sed habere et habuisse vim et naturam suam. Ut igitur faber, cum quid edificaturus est, non ipse facit materiam, sed ea utitur quæ sit parata, factorque item cæra: sic isti providentiæ divinæ materiam præsto esse oportuit, non quam ipse faceret, sed quam haberet paratam. Quid si non est à Deo materia facta, ne terra quidem, et aqua, et aer, et ignis à Deo factus est.

Atom is a Greek word, which signifies indivisible. It is a corpuscle of every kind of figure, from numbers of which all other bodies are formed. Atoms are not objects of the senses, through their extreme smallness, which makes them imperceptible.

Moschus the Phœnician, Leucippus, and Democritus, were the first philosophers, who advanced the doctrine of atoms.⁷ They suppose that of these little corpuscles, some are smooth, some rough, some round, some angular, and others curved, and in a manner hooked; and that heaven and earth were formed by the fortuitous concourse of these atoms.

But Epicurus particularly insisted upon this doctrine, which he placed in honour, introducing however some alterations in it, by which Cicero affirms, that he only spoiled the doctrine of Democritus, instead of correcting and improving it.⁸

Democritus places atoms in an infinite space, without either middle or extremities.⁹ There, in motion from all eternity, they unite and adhere to each other, and by such meeting and concourse, form the world as we see it. Cicero cannot bear that a philosopher, in explaining the formation of the world, should speak only of the material, without saying a word of the efficient cause. And indeed, what an absurdity is it to suppose, that certain solid and indivisible bodies move of themselves from all eternity by their natural weight! This Democritus holds as well as Epicurus: for the latter also gave his atoms a natural and intrinsic activity, which sufficed to put them in motion: but he differed from the former in other points.

"Epicurus pretends indeed, that atoms tend of themselves directly downwards, which motion he says is that of all bodies."¹⁰ Afterwards coming to reflect, that, if all atoms tended continually downwards in a direct line, and by a perpendicular motion, it would never be possible for one of them to touch another, he subtly imagined a declination or obliquity in their motion, by the means of which the atoms striking against each other, blend and hook themselves together, and form the world, with all the parts that compose it. Thus, by a mere fiction, he gives them at the same time, a slight declination or obliquity of motion, without alleging any cause

for it, which is shameful to a natural philosopher; and deprives them also without any cause of the direct motion downwards, which he had advanced as the law or tendency of all bodies. However, with all the suppositions he invents, he does not effect what he pretends. For if all atoms have an equal declination or obliquity of motion, they will never adhere to each other. And if some have it, and not others, to give these a direct, and those an oblique, motion, is giving them different employments upon trust and at a venture. With all this, it would not cease to be impossible for such a fortuitous clash or concourse of atoms ever to produce the order and beauty of the universe. "If the fortuitous concourse of atoms," says Cicero, elsewhere,¹¹ is capable of forming the world, why will it not as well form a portion, a temple, a house, or a city; works of much less difficulty? To reason in so absurd a manner, one would think, that these philosophers had never once looked up towards the heavens nor beheld all their wondrous and various beauties."¹²

The doctrine of void had induced Epicurus, as well as some other philosophers, to suppose a plurality of worlds, formed, as well as this we inhabit, by the fortuitous concourse of atoms.

Quare etiam atque etiam tales fateare necesse est
Esse alios alibi congressus material,
Qualis hic est, avido complexu quem tenet æther.

Lucr. l. ii.

Gassendi considers this opinion as contrary not only to the holy Scriptures, which mention no plurality of worlds, and seem to suppose only one, but also to that of the greatest philosophers, as Thales, Pythagoras, Empedocles, Anaxagoras, Plato, Aristotle, Zeno the Stoic, and many others. He owns however it cannot be demonstrated, that there are not other worlds besides this, because it is in the power of God to create as many as he pleases: but that it would be contrary to reason, to affirm actually that there are more, because God has not revealed that to us.

SECT. III.

Plato's Fine Thought of the Formation of the World.

I do not undertake to examine what Plato's opinions were concerning the formation of the world, which would require great discussion.

7 Ista flagitia Democriti, sive etiam antè Leucippi, esse corpuscula quædam lævia, alia aspera, rotunda alia, partim autem angulata, curvata quædam et quasi adunca: ex his effectum esse cælum atque terram, nulla cogente natura, sed concursu quodam fortuito. *De Nat. Deor.* l. i. n. 60.

8 Democrito adjicit, perpaucâ mutans, sed ita ut ea, quæ corrigere vult, mihi quidem depravare videatur. *De Finib.* l. i. n. 17.

9 *De Finib.* l. ii. n. 17, 18.

10 *Ib.* n. 18—20.

11 *De Nat. Deor.* l. ii. n. 94.

12 Certe ita temerè de mundo effutiant, ut mihi quidem nunquam hunc admirabilem cœli ornatum, qui locus est proximus, suspexisse videantur.

He sometimes calls matter eternal; by which he does not understand that it subsisted visibly from all eternity, but that it subsisted intellectually in the eternal idea of God. This is what he means, when he says, "the exemplar or model of the world is from all eternity."¹

Some lines before he has the thought of which I speak in this place: "God considering his work, and finding it perfectly conformable to his idea and original, rejoiced and in some measure applauded himself."² What Plato says here, that God formed the world according to the exemplar he had conceived of it in himself, is very remarkable. As a skillful workman has the whole disposition and form of his work in his head before he begins it, and works according to those ideas, so that what he executes, may be said to be only a copy of the original he has before imagined, every work that subsists, being pure imitation; in like manner God, in creating the world, only executed the idea he had conceived of it from all eternity. For the world, and all that it contains, existed intellectually in God, before it existed really in nature. These are Plato's ideas, which he might very possibly have extracted from the Scriptures,³ where we find that God gives Moses models of all the works, it is his will that prophet should execute. What is said in Genesis of God's first approbation of his works as they came from his hands, and afterwards of them all in general, when he had finished them, might more immediately have supplied Plato with that sublime idea of the eternal exemplars upon which the world was formed. For these words, "and God saw every thing that he had made: and behold it was very good,"⁴ signify, as the new interpreter of Genesis observes, "that God considering all his works at one view, and comparing them with each other, and with the eternal model of which they are the expression, found their beauty and perfection most excellent."⁵

In the little I have now said of Plato's opinions concerning the formation of the world, may be seen how much he rose upon the physical principles, which he might before have taken from Heraclitus.

The design of God, in setting before our eyes the infinite wonders of the world, was to make us discern, in the motion of all the parts of the universe, their relation to each other, and the concert between them, Him who has created,

and who governs them. He has every where placed footsteps of himself. He has concealed and veiled himself under the objects of nature; but these objects are so beautiful and grand, that they reveal the wisdom which formed, and directs them in a thousand different manners. How therefore could it possibly happen, that men considered as the sole sages of the earth, should be so blind and stupid as to attribute such wonderful effects to chance, destiny, matter, and the simple combination of the laws of motion, without God's having any other part in them, than to obey those laws? What is the intellect of man abandoned to its own darkness? The first words in the most ancient book in the world reveal to us this great truth: "In the beginning God created the heaven and the earth." These few words fix plainly, by the authority of revelation, all the doubts, and dispel all the difficulties, which so long perplexed the philosophers upon one of the most essential points of religion. They were not capable of knowing it perhaps with entire certainty by the sole light of reason, but they at least might, and ought to have had some idea of it. For either God must necessarily have created the heavens, the earth, and mankind; or they must have been eternal, which is far more inconceivable. Can a rational and unprejudiced mind ever be convinced in earnest, that matter, brute and void of intelligence in itself, could form beings that wear the stamp of perfect wisdom. The faith shortens the way very much, and spares us abundance of pains. There are subjects, in which reason, unaided by that light, can make no progress with any certainty.

ARTICLE III.

Of the Nature of the Soul.

There is hardly any question, about which the philosophers are more divided, than that which relates to the nature of the soul; and there is hardly one, which shows more sensibly, of what human weakness is capable, when guided solely by its own lights. They dispute much with each other about what the soul is, where it resides, whence it derives its origin, and what becomes of it after death.⁶ Some believe the heart itself to be the soul. Empedocles says, it is the blood which is mingled in the heart: and others that it is a certain part of the brain. Many affirm, that neither the heart, nor the brain, are the soul itself, but only the seat of the soul; and that it is a breath, or else a fire. This last is the opinion of Zeno the Stoic. Aristoxenus the musician, who was also a philosopher, makes it consist in a certain har-

¹ Τὸ παρόντως, πάντα διῶκα ἰστίῳ δὲ Plat. in Timæo, p. 38.

² Ἦγάσθη τι καὶ εὐχαριστῆς ἰσὶ δὴ πολλοὶ ἄνθρωποι πρὸς τὸ παρόντως ἰστίῳ δὲ ἀπογεγασσέναι. Ibid. p. 37.

³ Some have believed, that he had seen them during his travels.

⁴ Gen. i. 31.

⁵ Mr. du Guet.

⁶ Cic. Tusc. Quæst. l. i. n. 18, 22.

mony of the different parts of the body: Xenocrates places it in numbers, as Pythagoras had thought before him. Plato distinguishes three parts in the soul. He places the principal, which is reason, in the head: and makes the two others, choler and cupidity, reside, the first in the breast, and the other under the heart. Aristotle perceiving, that not one of the four principles, of which, according to him, all things are made, was susceptible of the properties of the soul, as thinking, knowing, loving, hating, &c. supposes a fifth, to which he gives no name; calling the soul by a new term, that, according to Cicero, signifies a continued and uninterrupted motion, but a term in effect, of which the most learned neither understand nor can explain the force.⁷

This is the enumeration Cicero gives us of the various opinions of the philosophers concerning the nature of the soul. For as to that of Democritus, who makes it consist of atoms, he does not think it worth repeating. He concludes this detail with these words, which seem to express a great indifference for so important a subject: "Which of all these opinions is true, some god may know; we content ourselves with inquiring which is the most probable."⁸ The system of the Academy, which he espoused, was, that the false is universally mingled in such a manner with the true, and resembles it so much, that there is no certain mark to distinguish them from each other. Accordingly Cicero, in the places where he mentions the immortality of the soul, speaks of it almost always with doubt, and as one who supposes the systems for and against it equally possible and rational. And would to God that only the ancient philosophers were to be reproached with this way of thinking! It certainly argues a deplorable blindness in them, and a renunciation of all light and reason. But this doubt, when voluntary and confirmed, is absolutely monstrous and inconceivable in a Christian. "The immortality of the soul," says M. Pascal in his *Thoughts*,⁹ "is a thing of such importance to us, and concerns us so highly, that one must have lost all reason to be indifferent about it. All our actions and thoughts must have so different a bent according to our belief that there are or are not eternal good things to be hoped, that it is impossible to take any step with sense and judgment, without regulating it with a view to this point, which ought to be our final object." Is there any stupidity, I could almost

say brutality, like that of daring to risk an eternity of happiness, or misery, upon a mere doubt?

Many of the philosophers, of whom I have been speaking, admitted only bodies, and no pure spirits distinct from matter; even the Stoics, whose moral doctrine in other respects included such fine principles, were of this number. They did not believe, that the soul was absolutely immortal, but only made it live a great while, *like crows*, says Cicero.¹⁰ Vossius,¹¹ in his treatise upon idolatry, believes, that by that *great while*, they understood the whole duration of the world, till the general conflagration. For, according to the Stoics, by an ultimate revolution, the whole world was to become only fire.¹² Particular souls were then, with all the rest, to be resolved into, and blended with the universal soul, their first principle. Till then they were to inhabit the upper region, where they would have nothing to do but to philosophize at their ease, supremely happy in the clear vision of the universe. Cicero describes this philosophical beatitude with a kind of enthusiasm.¹³ "Certainly," says he, "we shall be happy, when, with our bodies, we shall have thrown off all passion and disquiet. What now constitutes our joy, when free from all care we apply ourselves ardently to some object that engages and delights us, we shall then do with far greater liberty; abandoning ourselves entirely to the contemplation of all things, which it will be given us to know perfectly. The situation itself of the places to which we shall have attained, in facilitating to us the view of celestial objects, and in kindling in us the desire of penetrating their beauties, will enable us fully to satisfy the insatiable ardour natural to us for knowing truth.—And it will discover itself more or less to us, in proportion as we shall have been more or less solicitous to nourish ourselves with it during our abode upon earth. "—What a sight will it be, when we shall be able at one view to behold the whole earth, its situation, figure, limits, and all its regions, whether inhabited, or desert and void through excess of heat and cold!" Behold here then the extent of philosophic beatitude! What blindness and misery! We see, however, through this darkness, an admirable and very instructive principle: that in the other life, truth will reveal itself to us in proportion as we have sought after and loved it in this.

10 Stoici usuram nobis largiuntur, tanquam cornicibus: diu mansuros aiunt animos, semper negant. *Tusc. Quest.* l. i. n. 77.

11 Lib. i. c. 10.

12 De Nat. Deor. l. ii. n. 118.

13 *Tusc. Quest.* l. i. n. 44, 45.

14 Principes verò fruuntur eâ, qui tum etiam, cum has terras incoentes circumfusi erant caligine, tamen acie mentis dispicere cupiebant.

7 Quintum genus adhibet, vacans nomine; et sic ipsum animum *πρῶτον* appellat novo nomine, quâli quandam constantiam motionem, et perennem. *Cic. ibid.*

8 Harum sententiarum quæ vera sit, deus aliquis videt: quæ verisimillima, magna questio est.

9 Chap. i.

The philosophers, who admit the immortality of the soul, give it a more noble employment after death. I do not examine whether Aristotle is to be ranked in that number. That question has exercised and divided the learned, and is not for his honour, from only continuing dubious. As to Plato, we see in all his works, that, as well as Socrates his master, and Pythagoras who preceded them, he believed the soul to be immortal. Cicero, after having repeated many of his proofs, adds, that Plato seems to endeavour to persuade others of this truth, but to be fully convinced of it himself.¹

Plato, treading in the steps of Socrates, opens two ways for souls after death: 'one of these leads such as have sullied themselves with crimes and violence upon earth to the place of torments; and by the other ascend to the august assembly of the gods, the pure and innocent souls, that, during their abode in bodies, have had as little intercourse as possible with them, and have industriously imitated the life of the gods, from whom they derive their origin, by practising every kind of virtue. Right reason alone made these great philosophers perceive, that, to justify Providence, it was necessary, that there were rewards for the good, and punishments for the wicked, after this life.

ARTICLE IV.

Of the Effects of Nature.

This is properly the place where I should treat the Physics at large, and enumerate the principal questions it considers, in order to show the origin and progress of this science, and the different opinions of the ancients and moderns concerning it. But this subject, besides exceeding my ability, is too vast and extensive to be contained within the narrow limits of an abridgment. The reader may find it treated with great perspicuity in the work of F. Reynault the Jesuit, entitled, *The ancient origin of the modern physics*, of which I have made great use. He retains a very extraordinary moder-

ation in it, whilst he does equal justice to the ancients and moderns. I shall content myself, therefore, with some general reflections.

The physics alone, or almost alone, were for many ages the employment and delight of the learned of Greece. They were the reigning science there during about four hundred years.² The philosophers were divided into two famous schools; the Ionic, of which Thales was the founder; and the Italic, who followed Pythagoras, as I have observed before. But the philosophers, who acquired most fame in respect to physics, were Democritus and Leucippus, because Epicurus adopted their system, which we have extensively from Lucretius.

This system, as I have already observed, admitted no principles but matter and void; two points, of which the one, namely, vacuity, is scarce conceivable; and the other repugnant to reason, especially in respect to the inclination or obliquity, which Epicurus gives his atoms. Notwithstanding the absurdities of this system, the Epicureans, properly speaking, were the only natural philosophers of antiquity. They at least saw, that the causes of what happens to bodies were to be sought only in bodies, as well as their properties, motion, rest, and figure: and, with this principle, they do not explain certain particular effects amiss, though they err grossly in respect to first causes.

Aristotle treated the physics, or rather spoiled them, in explaining corporeal effects by terms that can relate only to mind, as *sympathy*, *antipathy*, *horror*, &c. and in defining things only by some of their effects, often ill chosen, expressed in an obscure manner, and almost always without showing their causes.

It was not till an age before the birth of Jesus Christ, that the physics began to appear at Rome, and to speak the Roman language there by the mouth of Lucretius. "At length," says that philosophical poet, "the secrets of nature are no longer mysteries; and I can boast of being the first that taught them to speak the language of our country."

Denique natura hæc rerum ratioque reperta est
Nuper; et hanc primus cum primis ipse repertus
Nunc ego sum, in patrias qui posaim vertere voces.

Lucr. l. v.

Seneca says,³ that the causes of the eclipses of the moon, and of many other phenomena in nature, were but lately known at Rome; with what reason I cannot say. Long before Pliny's

¹ Plato pro immortalitate animæ tot rationes attulit, ut velle cæteris, sibi certè persuasissæ, videatur. *Tusc. Quest.* l. i. n. 49.

² Ita censebat (Socrates) duas esse vias duplicesque cursus animorum à corpore excedentium. Nam qui se humanis vitis contaminassent, et se totos libidinibus dedissent, quibus cæcæ velut domesticæ vitis atque flagitis se inquinassent, vel in rep. violandæ fraudes inexpliabilis concepissent, his demum quoddam iter esse, seclusum à concilio deorum. Qui autem se integros castosque servavissent, quibusque, fulset minima cum corporibus contagio, seseque ab his semper servocassent, essentque in corporibus humanis vitam imitati deorum; his ad illos, à quibus essent profecti, reditum faciliem prætere. *Tusc. Quest.* l. i. n. 72.

³ From Thales to Hipparchus, with whom the natural philosophers of antiquity end, very near that number of years are computed.

⁴ Cur luna deficiat, hoc apud nos quoque nuper ratio ad certum perduxit. *Senec. Nat. Quest.* l. vii. c. 23.

time, the day and hour of eclipses were foretold: ⁵ and Cicero assures us, that in his time the hour and magnitude of all eclipses, either of sun or moon, had been calculated for all succeeding ages. ⁶ Sulpitius Gallus, the evening before Paulus Æmilius was to give Perseus battle, foretold an eclipse of the moon, that was to happen the same night, and gave the army the reasons of it. ⁷ The eclipse began exactly at the hour he had mentioned, which made the troops consider him as a person of more than human knowledge. "Edita horâ luna cùm defecisset, Romanis militibus Galli sapientia prope divina videri." This last example proves, that this kind of knowledge was very rare among the Romans in those days, who never applied themselves very much either to the study of physics, or the other superior sciences.

The Greeks differed much from them in this point. They cultivated them during a great length of time, and if the honour of inventing them be not their due, nobody can deny them that of having exceedingly improved them. It is not easy to find a system of the world applauded in our days, of which the ancients have not at least had some knowledge. If we fix the earth with Tycho Brahe, in order to make the sun, directed with Mercury and Venus, turn round it, that system was known to Vitruvius. ⁸ Some fix the sun and stars, to make the earth turn round from west to east exactly upon its centre: and this is the system, at least in part, of Ephantus the Pythagorean, and of Nicetas the Syracusan. The system now in vogue, is that which places the sun in the centre of a vortex, and the earth in the number of the planets: and which makes the planets turn round the sun in the following order: Mercury, nearest the sun; Venus; the Earth turning upon its centre, with the Moon revolving round it; Mars; Jupiter; and Saturn last of all. This system of Copernicus is not new: it is that of Aristarchus, ⁹ and part of the mathematicians of antiquity; of Cleanthes of Samos; ¹⁰ of Philolaus; ¹¹ of the Pythagoreans, ¹² and very probably of Pythagoras himself.

And, indeed, it had been a wonder if this system of Copernicus, which seems so rational,

had never entered into the thoughts of any of the ancient philosophers. This system, I say, appears very rational. For, if the earth did not move, the sun and all the stars, which are very great bodies, must make an immense revolution round the earth in twenty-four hours; and the fixed stars which would be in the greatest circle, where the motion is always the strongest, would in one day take a compass of three hundred millions of leagues, and go farther than from Paris to China in the time one could pronounce these words, *Go to China*. For all this must happen, if the earth does not turn round upon its own axis every twenty-four hours. It is not difficult to conceive, that it does turn round in this manner, which at most is not above nine thousand leagues, a trifle in comparison with three hundred millions.

Among the moderns, rational physics had made little progress, till the time of Descartes. He took from the Epicureans the principle, That to explain the effects of bodies, recourse was to be had only to bodies. But religion taught him to reject their impious principles of necessity and chance. For the principle of his physics he lays down a God the Creator and First Mover. He also proscribed the *Vacuum* as inconceivable, and *atoms*, admitting matter to be divisible *ad infinitum*, or, as he terms it himself, *ad indefinitum*. With matter and motion, which, he owns, could proceed only from the hands of God, he had the boldness to create a world: and instead of tracing effects to their causes, he pretended to establish causes, and to deduce effects from them. From thence flows his hypothesis of *Vortices*, which is the most probable opinion hitherto advanced upon the causes of the universe, though in a great number of particular consequences, Descartes, in effect of the weakness inseparable from human nature, is frequently enough mistaken.

His physics reigned in peace, when Newton undertook to dethrone them. He set the vacuum on foot again, and pretended to demonstrate the impossibility of vortices; in a word, to subvert entirely the Cartesian physics. Hence ensued a great war in the learned world, which has been carried on with abundance of warmth and vigour on both sides. Whether the learned Englishman has succeeded or not, is a question that does not concern me, and will not soon be decided. He has at least been more circumspect than Descartes, in having proposed to himself to proceed from known effects to the discovery of their causes.

It must be owned in general, that in respect to physics, the moderns have very much improved the learning of the ancients, and have added many new discoveries to them of great importance. And it could not have happened otherwise. Could it be possible, for so m

⁵ Inventa est jampridem ratio prænuntians horas, non modò dies ac noctes, solis lunæque defectuum. *Plin. l. xx. c. 2.*

⁶ Defectiones solis et lune cognitæ prædictæque in omne posterum tempus, quæ, quantæ, quando futurae sint. *Cic. De Nat. Deor. l. ii. n. 135.*

⁷ *Liv. l. xlv. n. 37.*

⁸ *Vitruv. de Archit. l. ix. p. 284, et 287. Plut. de placit. philos. l. iii. p. 806. Cic. Acad. Quest. l. iv.*

⁹ *Stob. Eclog. Phys. p. 54, et. 56.*

¹⁰ *Plut. de facie in orbe lunæ, p. 923.*

¹¹ *Plut. de placit. philos. p. 806.*

¹² *Aristot. de celo, l. ii. c. 13. p. 638.*

fine geniuses, as successively applied themselves to the observation of Nature, during the course of so many ages, not to have enriched physics, especially since they have discovered extraordinary aids which the ancients had not? Nature is an inexhaustible fund, and curiosity has scarce any bounds. Hence it was no illusion, when Seneca foresaw, that posterity would discover abundance of secrets in nature unknown in his time. "Nature," said that great man, "does not disclose all her mysteries at once. The time will come, when much that is now hid will appear in full light. Posterity will wonder how such evident things escaped us; and even the vulgar know, what we are ignorant of."¹ This opinion is entirely reasonable, and rich in sense. Many things have conduced to the considerable progress of the physics among the moderns. They may be said to have entirely changed face, and soared to new heights, since the learned have made it a law to themselves to study nature in nature itself, to make use of their own eyes and reason for discovering its mysteries, and no longer subject themselves blindly and without examination to the judgment of others; in a word, since they have thrown off the yoke of authority, which in physical matters ought not to enslave our minds, and is only proper to keep them, through weak respect, in a state of idle and presumptuous ignorance. What progress did physics make during the course of the fourteen or fifteen ages, in which the authorities of Aristotle and Plato were alternately the law? That method served only to excite vain disputes, to prevent generous efforts, and to extinguish all curiosity and emulation; whilst the lives of philosophers most capable of improving the physics, passed in knowing what had already been thought, rather than what one ought to think.

I always disliked a maxim of Cicero's, which, however, pleased him much, and which he repeats more than once. It is, that he had rather err with Plato, than think aright with the other philosophers. "*Errare meherculè malo cum Platone—quam cum istis vera sentire.*"² I do not see how this thought can consist with good sense. Is it ever just to prefer error to truth, under whatever fine name or specious form it may conceal itself? We see here the tendency of this kind of idolatry for great men. Only religion has a right to captivate our minds in this manner, because it has God himself for

its voucher, and there is no fear of erring with it.

Every body knows how much nature seems to affect concealing her secrets from us. To discover her mysteries, it is necessary to follow her step by step; we must to use the expression, surprise her in her operations; we must make observations and experiments; we must have a due number of phenomena, in order to establish a just principle for explaining them; and experiments must verify conjectures. The ancients practised all I have now said to a certain degree, and not without success. But the sagacity of the moderns, assisted by the invention of many new instruments, has rose exceedingly upon their knowledge. The principal of these new inventions are the telescope, the microscope, the Torricellian tube, or the barometer, and the air-pump.

One Zachariah Jansen invented the telescope and microscope about the end of the sixteenth century; Torricelli the tube, which bears his name, otherwise called the barometer, about the middle of the seventeenth century; and Otho Guericke the air-pump, some time after.

Zachariah Jansen was a Hollander of Middleburg in Zeland, by trade a spectacle-maker. Chance, by which a great number of the finest discoveries are made, and under which divine Providence delights to conceal itself, had a great share in this of Jansen. Without any premeditated design, he placed two spectacle-glasses at a certain distance opposite to each other, and perceived, that the two glasses in that situation magnified objects considerably. In consequence, he fixed glasses in that manner, and from the year 1590 made one of the length of twelve inches. Such was the origin of the telescope, which was afterwards greatly improved. The inventor of the telescope did in little almost what he had done in large; and from thence came the microscope. To the former of these instruments we are indebted for the knowledge of the heavens, at least in part; and to the latter for that of a new little world. For we must not believe that we see every thing that inhabits the earth. There are as many species of invisible as visible animals. We see them from the elephant to the mite. And there our sight ends. But at the mite begins an infinite multitude of animals, of which that insect is the elephant, and which our eyes cannot discern without aid. By the help of the microscope we see thousands of insects, swimming and darting to and fro, in the hundredth part of a drop of water. Lewenhoeck says, that he has seen fifty thousand in a very small drop of liquor. These glasses may be said to be a new organ of sight, which one could not have presumed to expect from the hands of art. How much would the ancients have been surprised, if it had been foretold to

1 *Rerum natura, sacra sua non simul tradit—Veniēt tempus, quo ista, quæ nunc latent, in lucem dies extrahat—quo posterī nostri tam aperta nesciēs nos mirentur—Multa venientis ævi populus ignota nobis sciet.*

2 *Tuscul. l. i. n. 39.*

them, that, by the means of certain instruments, their posterity should one day see an infinity of objects not seen by them : a heaven unknown to them, and plants and animals, of which they did not so much as suspect the possibility !

Torricelli was mathematician to the duke of Florence, and Galileo's successor. Galileo explained the rise of water in pumps to about thirty-two feet, by saying that nature abhorred a vacuum, and he fixed that height as the limit of its efficacy. In 1643, Torricelli tried the efficacy of this imaginary horror in quicksilver. He caused a glass tube of three or four feet to be made and sealed at the end hermetically. This he filled with quicksilver, and turned it upside down as is still practised. The quicksilver came down : but stopped, as of itself, at the depth of between twenty-seven and twenty-eight inches.

Otho Guericke, consul of Magdeburg, formed the design of trying a much greater kind of vacuum than that of the tube of Torricelli. Accordingly he caused a large round vessel of glass to be made, with a sufficiently small opening at bottom, and a pump and sucker to draw the air out of the vessel. And this was the origin of the air-pump. Wonders came from his hands, that amazed philosophers, no less than other people. With what astonishment, for instance, did they not see two brass basins, made exactly in the form of hemispheres, and applied to each other at their edges, that could not be separated by eight horses on a side made fast to each of them, and drawing different ways.

It is easy to conceive how much these machines, and others of a like nature, invented by the moderns, and much improved by use itself, and length of time, must have conduced to the progress of physical observations.

But what has contributed most to it, is the establishment of academies. The last age gave birth to four of the most famous almost at the same time. *The Academy del Cimento*, at Florence ; *the Royal Society*, at London ; *the Royal Academy of Sciences*, at Paris ; and *the Academy of the Curious in the secrets of nature*, in Germany. The desire of supporting the reputation

of a body of which one is a member, and of distinguishing one's self by important works, is a powerful incentive with the learned, which keeps them almost continually in action. Besides which, only societies, and societies protected by the prince, are capable of making the necessary collection of observations and well attested facts, for establishing a future system. Neither the learning, pains, life, nor faculties of a single person suffice for that. Too great a number of experiments, of too many different kinds, all too frequently repeated in too many various manners, and pursued with the same spirit for too great a length of time, are necessary to that effect.

I admire the wisdom and modesty of the Academy of Sciences, that, notwithstanding the many learned works with which it has enriched the public, and the many useful discoveries that are the fruits of its labours and observations, considers the sciences, at least the physics, as still in their cradle. But I admire still more the religious use it makes of such curious knowledge, which, according to it, ought to inspire us with a high regard for the author of nature, from the admiration of his works. " One can scarce help repeating often," say its memoirs, " that in respect to the physics, the most common objects become so many miracles, as soon as we consider them with certain eyes." And in another place, " The sublime reflections into which the physics lead us upon the Author of the universe, are not to be ranked among its simple curiosities. That great work, always the more wonderful the more it is known, gives us so high an idea of the Artificer, that we find ourselves lost in admiration and reverence of him, as often as we look into it. True physics rise so high as to become a kind of theology." Before I proceed to the mathematics, I shall touch lightly upon Physic or Medicine, Anatomy, Botany, and Chemistry, all which are either parts of, or relate to, physics in general or natural philosophy. Tertullian calls the physician's art *the sister of philosophy* ; and every body knows the three others depend on physic.

CHAPTER IV.

SECT. I.

OF PHYSIC.

I treat what relates to Physic in a separate chapter, to which I add Botany, Chemistry, and Anatomy, which are parts of it, but of which I shall say very little.

I In this chapter, Rollin has placed together, with propriety, Physic, Botany, Chemistry, and Anatomy; for they could scarcely in ancient times be considered as separate sciences. He has contented himself with very brief notices of each, which, however,—without entering into a technical or professional examination of the Greek medical writings—could not have been greatly extended. In the present Note, we propose merely to add a few observations to those already given, in order, particularly, that the reader may have a somewhat less limited view of the rise and progress of medicine.

A proficiency in the arts of practical physic appears to have existed in times and countries the most remote from civilization. This observation is confirmed not only by every account of barbarous life transmitted from the ancients, but still more clearly and copiously by those delineations of unpollished society afforded by the nautical discoveries of modern times. Many examples in proof might be adduced; but it will be sufficient to mention the singular proficiency in medicine displayed, three centuries ago, by the rude tribes of America, a part of mankind not owing obligations to any foreign intercourse. The navigators who first visited the shores of the New World assert, that not only had the aboriginal inhabitants rendered themselves acquainted with a copious store of powerful simples, but had even acquired the more difficult art of applying them with skill and precision to the removal of numerous and formidable maladies. For some of the choicest treasures of the *Materia Medica*, it is well known, the nations of the Old World are entirely indebted to those of the New; and the most obstinate diseases of civilized Europe have frequently yielded to simples, originally culled by savage hands amidst the wilds and forests of America.

It has sometimes proved matter of controversy, which of the departments of medical science ought to be esteemed the most ancient. But there need be little hesitation in assigning that honour to the *Materia Medica*, at least to that portion of it called *Dietetica*. Men had daily occasion to observe what meats and drinks were healthful or hurtful. Many of the substances destined for sustenance discover, in their extrinsic forms, no marks by which they may be distinguished from such as are unfit for the purpose. Repeated trials, we may conclude, many of them not without danger, could only have taught the early inhabitants of the world to distinguish what was esculent and salutary from what was innutritive or noxious. The primitive food of man would probably be the spontaneous products of the ground, and his first medicines would consist of vegetable simples, or plants which, by accident or experiment, he had discovered capable of producing upon the body what are called medicinal effects. When he began to employ flesh as an article of diet, a new species of knowledge, intimately connected with the progress of medical science, would dawn upon him. The practice of killing animals for food may be considered as one of the first circumstances that would give rise to anatomical investigations. But a more powerful incentive to this species of investigation would arise from his superstition. Misled by a false assimilation of the divine to the human nature, it has been the immemorial custom of communities not far advanced in civilization to sacri-

Physic is undoubtedly of the same date with diseases, for men have endeavoured to rid them-

fice to the Deity some of their esculent quadrupeds, and to scrutinize minutely the fabric, configuration, and position of the various deep seated organs of these offerings, with the view of ascertaining the course of future events. Such practices could not fail in producing an intimate knowledge of the visceral anatomy of the inferior animals, while more direct access to a knowledge of the human structure would result from the atrocious superstition, in some countries, of offering up human victims, and the custom of deliberately torturing or murdering prisoners taken in war. The art of embalming, too, in its diversified details, which was practised most extensively but not exclusively by the Egyptians, would necessarily throw much light on many parts of the human frame, and generally encourage anatomical investigation. Other causes may be conceived as contributing to the same effect; such as accidents laying open the integuments and other parts of the body; skeletons of men and animals found by chance; and wounds received in battle.

The discoveries of anatomy tardily achieved are still more slowly applied to the living subject, and much time would elapse before men had attained sufficient confidence in their own skill, to venture on those deep incisions, or bold dismembersments of one part of the body from another, so often demanded in the operations of the modern surgeon. It may be for this reason, that among uncivilised communities, the attainments of surgery are often found inferior to those in other branches of healing, particularly in what is called the practice of physic. Certain surgical facts, however, might rise to notice even during the darkest times. The body is perpetually liable to external casualties, no less than internal disorders, and attempts in every age must have been made for the relief of the former, no less than that of the latter. The weapons which the chance of war might throw from time to time into their bodies, it behoved men to extract with what skill they might; and the observation might readily occur, that to alleviate the pain of wounds and ulcers, it became frequently a useful expedient to defend their surfaces against the impressions of the external air. Even among nations not far advanced in refinement, accessions of improvement in this branch of healing might readily occur superior in importance to those just enumerated. The natives of Otaheite, according to Cook's narrative, exhibited considerable knowledge of an important department of surgery, namely, the treatment of broken bones. To keep the ends together, they employed the artifice of splints, but if the bone was much shattered, they amputated the limb. The Blacks that inhabit the kingdom of Issini remove the pleurisies of their country by deep scarifications of the shoulders, whence they extract the blood by means of a bullock's horn used in the manner of a cupping-glass. Similar skill is imputed by Mungo Park to the African nation known under the name of Mandingoes. The management of fractures and dislocations among this people, he says, is highly successful. The aboriginal Americans are no ways behind the rude nations of Africa in surgery. Lafitau celebrates the general skill of the Canadian tribes in ruptures, dislocations, and fractures. The Iroquois nation restores lesions of soft parts with uncommon rapidity by means of a method of suction. The wild natives

selves of them, ever since they knew them; and diseases are almost as ancient as the world itself, because they were the effect and punishment of sin. Men were long each his own physician,

and it is hard to fix the time when physic was first made an art and profession. Necessity and experience made way for them. In certain countries, those who had been cured of some

of Carthage Bay far exceed Europeans in the extraction and cure of the Guinea worm. Even the rude Patagonians, as we learn from Magellan, who first discovered and named them, appear acquainted with the alleviation of pain experienced in diseases by withdrawing a quantity of blood from the body. The above instances serve to show, that various modes of surgical practice are, in reality, not unfamiliar to savage nations, and that this branch of healing, though less mature in its origin and progress than the practice of physic, may yet have arisen during very early ages of the world. *

The Egyptians are considered as the first who reduced into principles, and subjected into certain rules, the vague and arbitrary practices in medicine that existed in early ages among mankind. To this they would be led by the frequency and fatality of their endemic diseases. The level and marshy soil of Egypt, acted upon by an almost tropical sun, must have been, at all times, peculiarly fertile in that class of maladies which, by the dreadful ravages they commit, are so apt to terrify men's minds into the belief, that they can proceed from no other source than the vengeance of an offended deity. Under such impression, the priestly aid would be, of course, invoked, and attempts made to stem the torrent of disease by prayers and expiations, sacrifices and ceremonies; but these measures continually failing, more effectual methods would be substituted in their room, or at least adopted as auxiliaries. At first, probably, each member of the hierarchy might exercise, indifferently, the functions of practical physic. As the art became more complicated, however, or advanced nearer maturity, it might be found necessary, to detach a portion of the priesthood from the accustomed duties of their order, and to invest them, more exclusively, with the offices of physician and surgeon. It appears from the writings of Clemens of Alexandria, that while one class of the sacred college of priests was to continue occupied in the ordinary functions of religion, a second or inferior order was to busy itself more particularly in the profession of healing. These last became, in time, so completely disjoined from their brethren as to be distinguished by an appropriate dress and a peculiar designation.

The writings of the Egyptian Thoth, the Hermes or Mercury of the Greeks, were held sacred, and his medical precepts strictly followed by every physician. If they were departed from in the least, and the patient died, the life of the physician became the forfeit. † This subjection of medicine to arbitrary rules is further confirmed by Aristotle, who speaks of an ancient law of the Egyptians, by which it was forbid to purge the sick before the fourth day of the distemper, unless the physician did it at his own risk. Under such absurd restrictions, medicine could not possibly make any progress in improvement.

Homer speaks of the immense number of medical practitioners in Egypt. This may be partly accounted for by the vast number of divinities worshipped there, of whom it was a common attribute to heal diseases, and the invoking of whom would require a proportionate number of priest-physicians. Besides, Herodotus informs us, that particular persons undertook the cure of particular diseases only. His words are, "The art of medicine is so practiced in Egypt, that there is found an individual healer

for each individual distemper. Hence, the whole country is filled with healers. Some take charge of disorders of the eyes, others of those of the head, others of those of the teeth, others of those of the abdomen, and others of secret diseases." * This state of the art indicates, on the one hand, that the practice of medicine must have been an object of considerable attention before such a division of labour could have taken place, while, on the contrary, it demonstrates, no less clearly, that the science must have been in a very low state; in short, that the only requisites for the practitioner were a degree of manual dexterity, and the possession of certain empirical remedies. This peculiar state of things might, in some measure, depend upon the custom, of handing down the same occupation from father to son, through successive generations, which prevailed universally among the Egyptians, and which, although it may be favourable to the perfection of any particular art, must undoubtedly prove a decisive obstacle to the general improvement of science and the progress of the mental powers.

From some passages in the Pentateuch, and especially from the account of leprosy in the book of Leviticus, we find, that the Jews had made, at an early period, a considerable progress in the knowledge of medicine. It is probable, that they were principally indebted for this to their residence in Egypt. The practice, it would appear, was chiefly confined to the priests, and consisted partly in dietetic regulations, and partly in superstitious ceremonies. In the time of the prophets, we gather from many expressions, that the Jews knew how to cure wounds, fractures, and bruises, by means of certain medicaments, such as rosin, balsam, oils, and the fat of animals. † Heseekiah, threatened with death from an abscess, is cured by the application of a cataplasm of figs. ‡

With regard to Greece, its first medical improvements are ascribed to several of the chieftains or petty sovereigns of its different states. So far as can be deduced from the narrative of Homer, and the other poetical annals, the physic of the heroic time appears of a nature almost wholly surgical, boasting for its highest proficiency little more than a slight degree of manual dexterity, with which to extract the various weapons of war that might be infixd in the body, certain crude notions in anatomy, and the knowledge of a few simples that might be applied with advantage to the cure of wounds and ulcers. Circumstances, therefore, would tend to throw it more particularly into the hands of the chieftains—especially, the exalted rank they held in the community, and their experience of the various accidents of a military life. Skill in surgery, or acquaintance with the powers of plants, by which it was taught how to extract the weapon from the wound, how to staunch the blood, or abate the pain, would be reckoned an acquisition of importance to the most distinguished hero; and therefore it becomes no improbable supposition, that some acquaintance with the resources of practical surgery would be attained by these personages. The acquirements of men will be found, for the most part, commensurate with their wants, and if to this circumstance be added the uniform testimony of tradition, the fact may be reasonably admitted, that the aboriginal princes of Greece possess an undoubted claim to be enrolled in the list of those who rendered the first services

* See Dr. Millar's *Disquisitions in the History of Medicine*, Edin. 1811, 8vo.

† *Diad. Sic. lib. i.*

* *Lib. ii. § 84.*

† See *Isaiah i. 6. Jerem. viii. 22. Ezek. xxx. 21.*

‡ *2 Kings xxi. 7. Isaiah xxxviii. 21.*

disease, wrote down how, and by what remedy it had been effected, and deposited these accounts in the temples, for the instruction of others in the like cases. ¹ In other places, as in

Egypt and Babylonia, the sick were exposed in public, in order that such as passed by, who might have been sick and cured of the same distemper, might give them advice. ²

¹ Plin. l. xxix. in Proœm.

² Her. l. i. c. 197. Strab. l. i. p. 155. et l. xvi. p. 746.

to medicine, or are in fact to be accounted among the most early benefactors of the science in the European world. Of these medical chiefs, the most distinguished are the five following: Chiron, surnamed the Centaur, Æsculapius, with his two sons Machaon and Podalirius, and Achilles, the hero of the Iliad.

Chiron is supposed to have been surnamed the Centaur, because by the poets he was fabled to be half horse, half man, a fiction probably arising from an opinion current in antiquity, that his countrymen, the Thessalians, were the first inhabitants of Europe who tamed the wild horse and subdued him to the use of man. Chiron was in reality a distinguished chief of Thessaly, and is said to have been the common preceptor of almost all the heroes who figured in the Argonautic and Trojan expeditions. By the voice of tradition, he is reckoned the great father of medicine in Greece, an honour to which it appears he may justly enough lay claim, since we learn, that among other heroes, Æsculapius himself was his pupil. So celebrated was he for the cure of ulcers, as we are informed by Galen, that, when a sore was obstinate, and could not be healed up, it was customary to call it a Chironian ulcer, intimating by the expression, that it was an ailment of such malignity as to baffle the skill even of Chiron himself. Tradition imputes to him the discovery of the virtues of the greater and lesser Centaury, and the plants are supposed to derive their appellation from that circumstance.

Æsculapius, a prince of Thessaly, and one of the heroes of the Argonautic expedition, was the most celebrated of the pupils of Chiron. He is said to have been born in Epidaurus, to have been exposed in his infancy, and accidentally discovered by a shepherd on the mountains, and to have been afterwards placed under the tuition of Chiron, from whom he acquired so much skill in medicine as even to restore the dead to life. Having from this circumstance excited the hostility of Pluto, who found himself in danger of being deprived of his consequence and authority, Æsculapius was destroyed by the thunderbolt of Jupiter. *

The fame of Æsculapius far eclipsed that of his preceptor Chiron. Festivals and sacred games were instituted to his memory; temples were erected to him in various parts of Greece, and he took his rank among the established divinities of his country. After a lapse of many ages, in consequence of a fatal epidemic which raged at Rome, the Senate were commanded, by the Sybilline oracle, to transfer the worship of Æsculapius to their city. A solemn embassy was accordingly appointed for this purpose; when the god is said to have been stolen from his native place under the form of a serpent, and thus carried into Italy where he was received with transport. The plague immediately ceased; his divine authority was recognized, and he continued ever after to hold a distinguished rank in the Roman mythology.

His sons, Machaon and Podalirius, as we learn from Homer, accompanied the Grecians to the siege of Troy, and their skill in the cure of wounds is recorded in terms of high commendation. Of the two, Machaon has been reputed the elder as well as the more dexterous in the surgical art, though, could we believe what is asserted by

tradition, his brother Podalirius might prefer a better claim to the honour of posterity, since he is reported to have been the first person who exhibited to mankind the practice as well as utility of blood-letting. Of his title to this discovery, however, the evidence is extremely defective. Besides that the only direct testimony in his favour is derived from the authority of a Byzantine historian, strong negative proof appears to be supplied against him in the silence of Homer, who, although he has described with minuteness the treatment of wounds as practised by the most celebrated leaders of the Grecian camp, is yet observed no where to make any mention of blood-letting.

Achilles, the hero of the Iliad, was a pupil of Chiron, and eminently skilled in all the medicine of his age. The herb Achillea is believed to have been so named because its virtues are said to have been first pointed out by Achilles. To the same hero we are said likewise to be indebted for our knowledge of the first mineral substance employed in surgery—verdigris or carbonate of copper—an article, we are informed, Achilles was accustomed to employ as an application to wounds. Thus Pliny relates, that in ancient pictures it was common to represent him in the attitude of scraping this substance from the point of his javelin, in order to sprinkle it on the wounds of Telephus—a remedy that, among others, he might have learned from Chiron, since we know from Homer that this celebrated weapon, so fatal to the warriors of Troy, was the gift of Chiron to his father Peleus.

After the death of Chiron and his pupils, there occurs an almost total blank in the history of medicine, comprehending an interval of many centuries, in which there is no distinct record of any considerable improvement having been made, nor any individual so far distinguished above his contemporaries as to require particular notice, if we except Melampus, who is reported to have been the first who ventured to administer, internally, a medicine derived from the mineral kingdom, and Orpheus, who, in addition to his reputation in poetry and music, is said to have augmented the stores of medicine, particularly by pointing out the effects of various poisons. During the above period, the practice of medicine in Greece was confined to priests, who administered in the temples of Æsculapius, and who obtained the name of Asclepiades. The temples that were erected to Æsculapius were numerous, but there were three that acquired a superior degree of celebrity, those of Cos, Cnidos, and Rhodes. From the imperfect account that we have of the practice of the Asclepiades, we may conceive, that it consisted, in a great degree, of those circumstances that were calculated to operate upon the imagination of the patients. Various rites and ceremonies were imposed upon them, and after their minds were thus wrought up to a proper pitch of enthusiasm, they were taught to expect that the method of cure would be revealed to them in dreams, inspired by the direct interference of the divinity. But although a large portion of the practice of the Asclepiades consisted of charms and mysteries, or of such remedies as were better adapted to act upon the mind than the body, yet it is probable, that, from the simple means of experience which they enjoyed, they would acquire some valuable knowledge respecting the phenomena of disease and the operation of medicines. Their experience would be much assisted by the custom which the patients adopted of

* Gronov. Thea. Græc. Antiq. vol. vii.

The Egyptians considered their god Hermes or Mercury, as the inventor of medicine. It is certain that they cultivated it both earlier and with greater success than any other people.

The Greeks disputed that glory with them, or at least followed them very close in it. They will supply us with all the physicians, of whom I shall speak: for the Romans applied them-

leaving behind them a narrative of the nature of their case, and the means of cure that had been employed, so that, to a certain extent, their temples became schools of medicine, and were the repositories of all the medical science which then existed. Pliny relates, that Hippocrates transcribed many of these records; and it is the opinion of some critics, that the precepts called *Cosæ prenomines*, which are generally printed among his works, consisted of the maxims which he collected from the temple of Cos. We are informed, that the temples of *Æsculapius* acquired reputation for different species of excellence. The *Asclepiades*, who were attached to that of *Cnidus*, were strictly empirical, and confined themselves to the mere collection of facts, while those of Cos approached more to the dogmatic system, and attempted to blend reason with experience; but although there may have been some shade of distinction between them, there is every reason to believe that they were all grossly ignorant, and that their general character was very contemptible.

About the end of the sixth century before the Christian era,—after medicine had remained so long in the hands of the priesthood, and had advanced so little under their influence,—some of the earlier Grecian philosophers appeared; and science, which had hitherto been pursued for the most selfish purposes, and had been mysteriously concealed from the vulgar, was now destined to be more liberally cultivated and diffused. The advantage which medicine derived from Pythagoras and other philosophers, who made physiology their study, was chiefly of an indirect kind, but by no means unimportant. They rescued it from the trammels of superstition and mystery, and what had been before regarded with awe and reverence, as a fit subject for those alone who were favoured with supernatural illumination, was now laid open for general investigation. The consequence of this reformation was soon manifest, in the appearance of HIPPOCRATES, who, like Homer and Shakspeare in epic and dramatic poetry, and like Michael Angelo and Raphael in the art of design, was destined to raise his profession from infancy to a state, at once, of comparative perfection.

Rollin has narrated in the text nearly all that is known of the life and character of Hippocrates; but he has not entered into any examination of his peculiar doctrines and merits as a physician and practitioner. It may, therefore, be advisable (even at the risk of being somewhat technical) to give, in this place, a general account of his opinions and practice, as preserved in his writings, in order that the reader may have some conception of the state of medical knowledge in his day. The following is abridged from an article in the *Encyclopedia Britannica*, drawn up, or at least revised, by Dr. Duncan of Edinburgh.

In the writings of Hippocrates we find a general principle adopted, which he calls Nature. "Nature," says he, "is of itself sufficient to every animal. She performs every thing that is necessary to them, without needing the least instruction from any one how to do it." Upon this footing, as if nature had been a principle endowed with knowledge, he gives her the title of *just*; and ascribes virtues or powers to her, by means of which she performs all her operations in the bodies of animals; and distributes the blood, spirits, and heat, through all parts of the body, which by these means receive life and sensation. And he adds, that it is this faculty which gives nourishment, preservation, and growth, to all things. The manner in which nature acts, or commands her subservient powers

to act, is by attracting what is good and agreeable to each species, and by retaining, preparing, and changing it; and on the other side in rejecting whatever is superfluous or hurtful, after she has separated it from the good. This is the foundation of the doctrine of depuration, concoction, and crisis in fevers, so much insisted upon by Hippocrates and most other physicians. He supposes also, that every thing has an inclination to be joined to what agrees with it, and to remove from every thing contrary to it; and likewise that there is an affinity between the several parts of the body, by which they mutually sympathize with each other. When he attempts to explain what nature is, he is obliged to resolve it into *heat*, which, he says, appears to have something immortal in it. As far as he attempts to explain the causes of disease, he refers much to the humours of the body, particularly to the blood and the bile. He treats also of the effects of sleep, watchings, exercise, and rest, and the benefit or mischief we may receive from them. Of all the causes of diseases, mentioned by Hippocrates, the most general are diet and air. On diet he composed several books, and in the choice of this he was exactly careful, as his practice turned almost wholly upon it. He also studied the air very much; he examined what winds blew ordinarily or extraordinarily; he considered the irregularity of the seasons, the rising and setting of stars, and the time of certain constellations; of the solstices, and of the equinoxes; those days, in his opinion, producing great alterations in certain diseases.

He does not, however, attempt to explain how, from these causes, the great variety of distempers arises. All that he says with regard to this is, that the different parts of the body produce a great variety of distempers. Some of these he accounts *mortal*, others *dangerous*, and the rest easily *curable*, according to the cause whence they spring and the parts on which they fall. He also distinguishes diseases, from the time of their duration, into *acute or short*, and *chronical or long*; as well as by the particular places where they prevail, whether ordinary or extraordinary. The former, which are frequent and familiar to certain places, he calls endemic diseases; the latter, which ravage extraordinarily sometimes in one place, sometimes in another, and seize great numbers at certain times, he calls epidemic, that is, *popular* diseases; and of this kind the most terrible is the plague. He likewise mentions a third kind, which he calls *sporadic*, or straggling diseases; these include all the different sorts of distempers which invade at any one season, which are sometimes of one sort, and sometimes of another. He distinguishes between those diseases which are hereditary, or born with us, and those which are contracted afterwards; and between those of a *kindly*, and those of a *malignant* nature; the former, he says, are easily cured, but the latter give the physicians a great deal of trouble, and are seldom overcome by all their care.

Hippocrates remarked four stages in distempers; viz. the beginning of the disease, its augmentation, its state or height, and its declination. In such diseases as terminate fatally, death comes in place of the declination. In the third stage, therefore, the change is most considerable, as it determines the fate of the sick person; and this is most commonly done by means of a crisis. By this word he understood any sudden change in sickness, whether for the better or for the worse, whether health or death succeed immediately. Hippocrates imagined diseases to be only a disturbance of the animal economy, with which

selves little to this science. Before the Trojan war, Chiron the Thessalian, surnamed the Centaur, who was Achilles's governor, made himself famous in physic, by the cure of wounds,

and the knowledge of simples, which he imparted to that hero, and his friend Patroclus.

Æsculapius, Chiron's disciple, did not give place to his master. Pindar represents him as

nature was perpetually at variance, and using her utmost endeavours to expel the humourous cause; by reducing to their natural state those humours whose discord occasions the disturbance of the whole body, whether in relation to their quantity, quality, mixture, motion, or any other way in which they become offensive. The principal means employed by nature for this end he calls *concoction*. By this he understood the bringing the morbid matter in the humours to such a state as to be easily fitted for expulsion. The time required for concoction depends on the differences among distempers. In those which Hippocrates calls *very acute*, the digestion or crisis happens the 4th day; in those which are only *acute*, it happens on the 7th, 11th, or 14th day; which last is the longest period generally allowed by him in distempers truly acute: though in some places he stretches it to the 20th or 21st, nay, sometimes to the 40th or 60th day. All diseases that exceed this last term he calls *chronical*: and while in those diseases that exceed 14 days, he considers every 4th day as *critical*, or at least remarkable, by which we may judge whether the crisis on the following 4th day will be favourable or not; so in those which run from 20 to 40 he reckons only the 7ths, and in those that exceed 40 he begins to reckon by 20. Beyond the 180th he thinks that the number of days has no power over the crisis. They are then referred to the general changes of the seasons; some terminating about the equinoxes; others about the solstices; others about the rising or setting of the stars of certain constellations; others by months or years. Thus certain diseases in children have their crisis in the 7th month after their birth, and others in their 7th, or even their 14th year.

But what has chiefly contributed to procure the vast respect paid to Hippocrates, is his industry in observing the most minute circumstances of diseases, and his exactness in describing every thing that happened before, and at the same time with them; and likewise what appeared to give ease, and what to increase the malady: which is called *writing the history of a disease*. Thus he not only distinguished one disease from another by the signs which properly belong to each, but by comparing the same sort of distemper which happened to several persons, and the accidents which usually appeared before and after, he could often foretell a disease before it came, and afterwards give a right judgment of the event of it. By this way of prognosticating, he came to be exceedingly admired; and this may justly be said to be his masterpiece; for, as Celsus remarks, succeeding physicians, though they found out several new things, yet were obliged to Hippocrates for all that they knew of signs.

The first thing Hippocrates considered, when called to a patient, was his looks.—It was a good sign to have a visage resembling that of a person in health, and the same with what he had before the disease. As it varied from this, so much the greater danger was apprehended. He thus describes the looks of a dying man: "When a patient has his nose sharp, his eyes sunk, his temples hollow, his ears cold and contracted, the skin of his forehead tense and dry, and the colour of his face tending to a pale green, or lead colour, one may give out for certain that death is very near; unless the strength of the patient has been exhausted all at once by long watchings, or by a looseness, or being a long time without eating." This observation has been confirmed by those of succeeding physicians, who have, from him, denominated it the *Hippocratic face*.

The lips hanging relaxed and cold, he likewise considered as a confirmation of the foregoing prognostic. He also took his signs from the eyes: When a patient cannot bear the light; when he sheds tears involuntarily: when sleeping, some part of the white of the eye is seen, unless he usually sleeps in that manner, or has a looseness: these signs prognosticate danger. The eyes desided, as it were, with a mist spread over them, or their brightness lost, likewise presages death, or great weakness. The eyes sparkling, fierce, and fixed, denote the patient to be delirious, or that he soon will be so. When the patient sees any thing red, and like sparks of fire or lightning before his eyes, we may, he says, expect a hemorrhage; and this often happens before those crises which are to be attended by a loss of blood. The condition of the patient is also shown by his posture in bed. If he lies on one side, his body, neck, legs, and arms, a little contracted, which is the posture of a man in health, it is a good sign: if he lies on his back, his arms stretched out, and his legs hanging down, it is a sign of great weakness; when he slides down, towards the feet, it denotes death. When a patient in a burning fever is continually feeling about with his hands and fingers, and moves them up before his face and eyes, as if he were going to take away something before them; or on his bed-covering, as if he were picking or searching for little straws, or drawing out little flocks of wool; all this Hippocrates considers as a sign that the patient is delirious, and that he will die. Among the other signs of delirium he adds this: When a patient who naturally speaks little begins to talk more than he used to do, or when one that talks much becomes silent, this change is to be reckoned a sort of delirium or a sign that the patient will soon fall into one. The frequent trembling or starting of the tendons of the wrist presage likewise a delirium.

Hippocrates was much more afraid of those deliriums that run upon mournful subjects, than such as are accompanied with mirth. He depended much on respiration in making his prognostics; and therefore carefully describes the different manner of a patient's breathing. When a patient breathes fast, and is oppressed, it is a sign that he is in pain, and that the parts above the diaphragm are inflamed. Breathing long, or when the patient is a great while in taking his breath, shows him to be delirious; but easy and natural respiration is always a good sign. Continual watchings, in acute diseases, are signs of present pain, or approaching delirium.

Hippocrates also drew signs from all kinds of excretions, and inquired into the state of the pulse, or the beating of the arteries. The most ancient physicians, however, and even Hippocrates himself, for a long time, by this word understood the violent pulsation that is felt in an inflamed part, without putting the fingers to it. It is observed by Galen, and other physicians, that Hippocrates touches on the subject of the pulse more slightly than any other on which he treats. But that he understood something even on this subject, is plain from several passages in his writings; as when he observes, that in acute fevers the pulse is very quick and very great; when he mentions trembling pulses, and those that beat slowly; when he observes, that in some diseases incident to women, when the pulse strikes the finger faintly, and in a languishing manner, it is a sign of approaching death. He remarks also, in the *Conca Præcætionæ*, that he whose vein, that is to say, whose artery of the elbow, beats, is just going to run mad, or else that the person is at that time very much under

extremely versed in all the parts of physic¹ Fable tells us, Jupiter, enraged that he had restored Hippolitus the son of Theseus to life, killed him with thunder; which intimates,

¹ Pindar. Pythior. Od. 3.

the influence of anger. From this account of Hippocrates, it appears, that he was not so much taken up with reasoning on the phenomena of diseases as with reporting them. He was content to observe these phenomena accurately, to distinguish diseases by them, and judged of the event by comparing them exactly together. For his skill in prognostics he was indeed very remarkable, inasmuch that he and his pupils were considered as prophets.

One of the principal maxims of Hippocrates, for the preservation of health was, that we ought not to overcharge ourselves with too much eating, or neglect exercise and labour. Another was, that we ought not to accustom ourselves to too nice and exact a method of living; because those who have once begun to act by this rule, if they vary in the least from it, find themselves very ill; which does not happen to those who take more liberty, and live somewhat more irregularly. He, however, did not neglect to inquire into what people in health used for food in his time; for he takes great pains to tell the difference between the flesh of a dog, a fox, a horse, and an ass; which he would not have done if they had not been then used for food. He also speaks of all other kinds of provision now in use; as salads, milk, whey, cheese, flesh of birds and beasts, fish, eggs, pulse and grain, with the different sorts of bread made of it. He also speaks often of a sort of broth, made of barley or some other grain, which they steeped and boiled in water. With regard to drink, he is at great pains to distinguish good waters from bad. The best ought to be clear, light, without smell or taste, and taken out of the fountains that turn towards the east. The salt waters, hard waters, and those of fenny ground, are the worst; he condemns also those that come from melted snow: yet he advises persons in health to drink of the first water that comes in their way. He speaks also of alum waters, and hot waters. He advises to mix wine with an equal quantity of water, as the wine will expel what is hurtful, and the water will temper the acrimony of the humours. For persons in health, as well as for such as are sick, Hippocrates advises exercise. The books, however, which treat on this subject, M. Le Clerc supposes to have been written by Herodiscus, who first introduced gymnastic exercise into medicine, and who is said by Hippocrates to have killed several people by forcing them to walk while they were afflicted with fevers and other inflammatory disorders. These books contain directions for the times proper for walking; the condition we ought to be in before it; when to walk slowly, when to run, &c.; and all this with respect to different ages and temperaments, and with design to dissipate the humours, &c. Wrestling, though a violent exercise, is numbered with the rest. Mention is also made of a play of the hands and fingers, which was thought good for health, called *chironomia*; and of another diversion performed round a sort of ball hung up, which they called *corymbus*, and which they struck forward with both hands.

From the above account of the opinions of Hippocrates, it may be concluded, that he would generally be contented with observing what nature is able to accomplish without the aid of the physician. That this was really the case, appears from his books entitled, *Of Epidemical Distempers*; which are, as it were, journals of his practice; for there he often does nothing more than describe the symptoms of a distemper, and what had happened to the patient day

that by his skill he cured such desperate diseases that he was said to restore the dead to life. Having been placed in the number of the immortals, temples were erected to him in dif-

after day, to his death or recovery, without mentioning any kind of remedy. Sometimes, however, he did use remedies; but these were very simple and few, as will appear from the following abridgment of the principal maxims on which his practice was founded. He asserted, 1st, That contraries are the remedies for each other. This maxim he explains by an aphorism, that evacuations cure those distempers which come from repletion, and repletion those that are caused by evacuation. So heat is destroyed by cold, and cold by heat, &c. 2. That physic is an addition of what is wanting, and a retrenchment of what is superfluous: that there are some humours, which in particular cases ought to be evacuated, or dried up; and others, which ought to be restored to the body, or reproduced. But he gives this general caution, to be careful how you fill up, or evacuate, all at once, or too quickly, or too much; and that it is equally dangerous to heat or cool again on a sudden. 3. That we ought sometimes to open the passages by which the humours are voided naturally, when they are closed; and to straiten the passages that are relaxed, when the juices pass in too great quantity. 4. That we ought sometimes to smooth, and sometimes to make rough; sometimes to harden, and sometimes to soften; sometimes to make more fine or supple; sometimes to thicken; sometimes to rouse up, and at other times to stupify or take away the sense; all in relation to the solid parts of the body, or to the humours. 5. That we ought to have regard to the course the humours take, whence they come, and whither they go; and to carry off that which is necessary to be carried off; and not let the humours once evacuated enter into the vessels again. Hippocrates says, that when we do any thing according to reason, though the success be not answerable, we ought not too hastily to alter the manner of acting. But as this maxim might sometimes lead to mistakes; he adds, "We ought to mind with a great deal of attention what gives ease, and what creates pain; what is easily supported, and what cannot be endured." These are the principal maxims of Hippocrates's practice, founded on the supposition that nature cures diseases.

We now proceed to consider particularly the remedies employed by Hippocrates.

Diet was the first, the principal, and often the only remedy he made use of; by means of it he opposed moist to dry, hot to cold, &c.; and thus he supported nature, and assisted her to overcome the malady. The dietetic part of medicine was so much the invention of Hippocrates himself, that he claimed to be the author of it; and says, that the ancients had wrote almost nothing concerning the diet of the sick, having omitted this point, though it was one of the most essential parts of the art. The diet he prescribed for patients labouring under acute distempers differed from that which he ordered for those under chronic ones. In the former he preferred liquid food to solid, especially in fevers. For these he used a sort of broth made of cleansed barley, which he called *psitan*. The manner in which the ancients prepared *psitan*, was this: They first steeped the barley in water till it was plumped up; and afterwards they dried it in the sun, and beat it to take off the husk. They next ground it; and having let the flour boil a long time in the water, they put it out into the sun, and when it was dry they pressed it close. This flour was properly the *psitan*. They did almost the same thing with wheat, rice, lentiles, and other grain; but they gave these *psitans* the name of the grain

ferent places as the god of health. The most famous was that of Epidaurus. It was from thence, in consequence of a famous deputation, at the head of which was Q. Ogulnius, that he

is pretended to have come to Rome in the form of a serpent, and to have delivered the city from the plague, in the year 461 from its foundation. A temple was afterwards built for him without

whence they were extracted, as *pisan* of lentils, rice, &c. whereas the pisan of barley was called simply *pisan*, on account of its excellency. To use it, they boiled one part of it in 10 or 15 of water; and when it began to grow plump in boiling, they added a little vinegar, and a small quantity of anise or leek, to keep it from clogging or filling the stomach with wind. Hippocrates preferred the pisan to all other food in fevers, because it was soft, and of easy digestion. In a continual fever, he ordered the patient to begin with a pisan of a pretty thick consistence, and go on by little and little, lessening the quantity of barley flour as the height of the distemper approached; so that he did not feed the patient but with what he called the *juice of the pisan*; that is, the pisan strained, where there was very little of the flour remaining, that nature, being discharged in part from the care of digesting the aliments, might the more easily hold out, and overcome the distemper, or the cause of it. He caused the pisan to be taken twice a day by such patients as in health used to take two meals a day; but he would not allow it twice a day to those who eat but once a day in health. In the paroxysm of a fever he gave nothing; and in all distempers where there are exacerbations, he forbade nourishment while the exacerbations continued. He let children eat more; but those who were grown up, or were of an advanced age, less; making allowance, however, for the custom of each patient, or for that of the country. But though he would not allow too much food to the sick, he prohibited long abstinence, especially in the beginning of fevers. The contrary practice, he said, weakened the patients too much during the first days of the distemper, by which means their physicians were obliged to allow them more food when the illness was at its height. Besides, in acute distempers, and particularly in fevers, he prescribed refreshing and moistening nourishment: and among other articles, oranges, melons, spinach, gourd, and dock. This food he gave to those who could eat, or take something more than pisan. The drink he gave to his patients was made of 5 parts of water and one of honey. In some distempers he added a little vinegar; they had also another sort named *aurase*, or *mature*; which consisted of rue, anise, celery, coriander, juice of pomegranate, the roughest red wine, water, flour of wheat and barley, with old cheese made of goat's milk. Hippocrates did not approve of giving plain water to the sick; but he did not forbid wine, even in acute distempers and fevers, provided the patients were not delirious, nor had pains in the head. He preferred white wine that is clear and has a great deal of water, with neither sweetness nor flavour. These are the chief particulars concerning diet prescribed by Hippocrates in acute distempers; in chronic ones he made much use of milk and whey.

In many diseases he judged the bath a proper remedy. Among the circumstances necessary to cause the patient receive benefit from it, the following are the principal. The patient must remain still and quiet in his place without speaking, while the assistants throw water over his head, or are wiping him dry; for which last purpose he desired them to keep sponges, instead of that instrument called by the ancients *strigil*, which served to rub off from the skin the dirt left upon it by the unguents and oils with which they anointed themselves. The patient must also take care not to catch cold; and must not bathe immediately after eating and drinking, nor eat or drink immediately after coming out of the bath. It should also be inquired, if the patient has been accustomed to bathe while in health,

and whether he has been benefited by it. He must abstain from the bath when the body is too open, or too costive, or when he is too weak; or if he has an inclination to vomit, a great loss of appetite, or bleeds at the nose. The advantage of the bath consists in moistening and refreshing, taking away weariness, making the skin soft and the joints pliant; in provoking urine, and opening the nostrils and other excretories. Hippocrates allowed two baths in a day to those who have been accustomed to it.

In chronic distempers Hippocrates approved much of exercise, though he did not allow it in acute ones; but even in these he did not think that a patient ought always to lie in bed; but says, "we must sometimes push the timorous out of bed, and rouse up the lazy."

When diet and exercise were not sufficient to ease nature of a burden of corrupted humours, he made use of other means, of which purgation was one. By this word he understood all the means used to discharge the stomach and bowels; though it commonly signifies only evacuation by stool. This evacuation he imagined to be occasioned by the purgative medicines attracting the humours to themselves. When first taken into the body, he thought they attracted that humour which was most similar to them, and then the others, one after another.—Most of the purgatives used in his time were emetics also. These were the white and black hellebore; the Cnidian berries, or seeds of thymelæa or chameleia; cheorum pepium, a sort of milk-thistle; thapsia; the juice of hippocaster, a sort of rhamnus; elaterium, or juice of the wild cucumber; flowers of brass, colocintida, scammony, the magnesian stone, &c. These purgatives being all very strong, Hippocrates was very cautious in their exhibition. In his books *Of Epidemical Distempers*, there are very few patients mentioned to whom he gave purgative medicines. He says expressly, that these medicines, having been given in cases of the distempers of which he was treating, had produced very bad effects; though in some places he mentions his having given them with success. He reckoned purging good in a pleurisy, when the pain was seated below the diaphragm; and in this case he gave black hellebore, or pepium, mixed with the juice of *laserpitium*, which is supposed to have been our asafœtida. His principal rule with regard to purging is, that we ought only to purge off the humours that are concocted, and not those that are yet crude; taking particular care not to do it at the beginning of the distemper, lest the humours should be disturbed or stirred up. The Egyptian physicians had also remarked, that it would be of ill consequence to stir the humours in the beginning of an acute distemper. By the beginning of a distemper, Hippocrates understood all the time from the first day to the 4th, complete. Hippocrates imagined that each purgative medicine was adapted to carry off some particular humour; and hence the distinction of purgatives into *hydragogæ*, *chylagogæ*, &c. now justly exploded. In consequence of this notion, which prevailed long after his time, he pretended that we knew if a purgative had drawn from the body what was fit to be evacuated, according as we found ourselves well or ill after it.

Emetics were also pretty much used as medicines by Hippocrates. To the sick he sometimes advised the same with those above-mentioned as preventives, when his intentions were only to cleanse the stomach. But when he wished "to recall the humours from the inmost recesses of the body," he made use of brisker remedies. Among these was white hellebore, which he gave most frequently

the walls. That of Cos, the country of Hippocrates, was also very famous. In it were several tables or paintings, on which were written down the remedies the god had directed many

sick persons to take, who had been cured in effect.

Homer makes mention in the *Iliad* of *Æsculapius's* two sons, both famous physicians,

to excite vomiting, particularly to melancholy and mad people; and from the great use made of it in these cases by him and other ancient physicians, the phrase *to have need of hellebore*, became proverbial, for being out of one's senses. He gave it also in defluxions, which come, according to him, from the brain, and fall on the nostrils or ears, or fill the mouth with saliva, or that cause stubborn pains in the head, and a weariness or an extraordinary heaviness, or a weakness of the knees, or a swelling all over the body. He gave it to consumptive persons in broth of lentils, to such as were afflicted with *leucoplegmatia*, and other chronic disorders. But he made no use of it in acute distempers, except in the cholera morbus. Some took this medicine fasting; but most took it after supper, that, by mixing with the aliments, its acrimony might be abated, and it might operate with less violence on the membranes of the stomach. With the same intention he also gave a plant called *asamoides*, and sometimes mixed it with hellebore. In certain cases he gave what he called *soft or sweet hellebore*; either from its quality, or perhaps from the quantity given.

When Hippocrates intended only to keep the body open, or evacuate the intestines, he used simples; e. g. the herb mercury, or cabbage; the juice or decoction of which he ordered to be drank. For the same purpose he used whey, and also cows' and asses' milk with a little salt, and sometimes boiled a little. If he gave asses' milk alone, he caused a great quantity of it to be taken, that it might loosen the body. In one place he prescribes no less than 9 lb. as a laxative. With the same intention he made use of *suppositoria* and *clysters*. The former were compounded of honey, the juice of the herb mercury, of nitre, powder of colocyth, and other sharp ingredients. These were formed into a ball, or into a long cylindrical mass like a finger. The clysters were sometimes the same with those already mentioned as preventives. At other times he mixed the decoction of herbs with nitre, honey, and oil, or other ingredients, according as he imagined he could attract, wash, irritate, or soften. The quantity of liquor he ordered was about 36 oz. from which it is probable he did not intend that it should be all used at once. Hippocrates sometimes proposed to purge the head alone. This practice he employed, after purging the rest of the body, in apoplexy, inveterate pains of the head, a certain sort of jaundice, consumption, and the greater part of chronic distempers. For that purpose he used the juices of several plants, as celery; to which he added aromatic drugs, making the patients snuff up this mixture into their nostrils. He used also powders compounded of myrrh, the flowers of brass, and white hellebore, which he caused them to put up into the nose, to make them sneeze, and to draw the phlegm from the brain. For the same purpose also he used what he calls *tétragonon*, i. e. "something having four angles;" but what this was, is now altogether unknown, and was so even in the days of Galen, who, however, supposes it to be antimony, or certain flakes found in it.

Blood-letting was another method of evacuation used by Hippocrates. One aim he had in this, besides the mere evacuation, was to divert or recall the course of the blood, when he imagined it was going where it ought not. A third end of bleeding was to procure a free motion of the blood and spirits; upon which subject he had formed a very absurd theory. His fourth intention for bleeding was

refreshment. In the *Iliac* passion he ordered bleeding in the arm and in the head, "that the superior venter, or the breast, may cease to be overheated." With regard to this evacuation, his conduct was much the same as to purging in respect of time and persons. We ought, says he, to let blood in acute diseases, when they are violent, if the party be lusty and in the flower of his age. In these cases he would have the patients bled till they faint, especially if the pain be very acute; and advises that the orifice should not be closed till the colour of the blood alters, so that from livid it turn red, or from red livid. In a quinsy he bled in both arms at once. Difficulty of breathing he also reckons among the distempers that require bleeding; and in another sort of inflammation of the lungs, he advises to bleed in all parts of the body, particularly the arms, tongue, and nostrils. To make bleeding the more useful in all pains, he directed to open the vein nearest the part affected. When the pain was not urgent, and bleeding was advised by way of prevention, he directed the blood to be taken from the parts farthest off, to divert the blood insensibly from the seat of pain. The highest burning fevers, which show neither signs of inflammation nor pain, he did not rank among those distempers that require bleeding. On the contrary, he maintained that a fever is in some cases a reason against bleeding. If any one, says he, has an ulcer in the head, he must bleed, *unless he has a fever*. He adds, those that lose their speech on a sudden must be bled, *unless they have a fever*. In other places also he looks upon the presence or abundance of bile to be an objection to bleeding; and he orders to forbear venesection, even in a pleurisy, if there be bile. Hippocrates distinguished very particularly between a fever which followed no other distemper, but was itself the original malady, and a fever which came upon inflammation. In the early ages of physic, the first were only properly called *fevers*; the others took their names from the parts affected; as *pleurisy*, *peripneumony*, *hepatitis*, *nephritis*, &c. which signify that the pleura, the lungs, the liver, or the kidneys, are diseased; but do not intimate the fever which accompanies the disease. In this latter sort of fever Hippocrates constantly ordered bleeding, but not in the former. Hence, in his books *Of Epidemic Distempers*, we find few directions for bleeding in acute distempers, and particularly in the great number of continual and burning fevers there treated of. In the 1st and 3d book we find but one instance of bleeding, and that in a pleurisy, on the eighth day of the distemper. Hippocrates, in fact, chiefly depended upon the assistance of nature, and his method of diet. These are his principles, from which he never deviates; and his pieces *Of Epidemic Diseases* seem to have been written on purpose to leave to posterity an exact model of management in pursuance of them.

As to Hippocrates's rules for bleeding, in all diseases which had their seat above the liver, he bled in the arm, or in some of the upper parts of the body; but for those situated below it, he opened the veins of the foot, ankle, or ham. If the belly was too laxative, and bleeding was at the same time thought necessary, he ordered the looseness to be stopped before bleeding. Almost all these instances, however, occurred in acute distempers; but we find several cases in chronic diseases. Hippocrates let blood also in dropsy, and tympany, in the arm. In a disease occasioned by an overgrown spleen, he proposed

the one called Machaon, very expert in chyrurgical operations, which in those times, as well as in the succeeding ages, was not distinct from the practice of physic; the other

Podalirius, more versed in the kind of physic called afterwards *λογική*, that is to say, founded upon principles and reasonings.¹ On his return from the Trojan war, Podalirius was driven by

bleeding several times repeated at a vein of the arm which he calls the *epitactic*; and in a kind of jaundice, he proposes bleeding under the tongue. On some occasions he took away great quantities of blood. The veins he opened were those of the arm, the hands, the ankles on both sides, the hams, the forehead, behind the head, the tongue, the nose, behind the ears, under the breasts, and those of the arms; besides which, he burnt others, and opened several arteries. He likewise used cupping vessels, to recall or withdraw the humours which fell upon any part. Sometimes he contented himself with the bare attraction made by the cupping vessel, but sometimes also he made scarifications.

When the principal and most general means used by Hippocrates for taking off a plethora, viz. bleeding and purging, proved insufficient, he had recourse to diuretics and sudorifics; sometimes baths, and sometimes sweet wine, were employed to provoke urine; sometimes nourishment, and among those herbs which are commonly eaten, Hippocrates recommends garlic, leeks, onions, cucumbers, melons, gourds, fennel, and all other things which have a biting taste and a strong smell. With these he numbers honey, mixed with water or vinegar, and all salt meats. But, on some occasions, he took four cantharides, and pulling off their wings and feet, gave them in wine and honey. These remedies were given in a great number of chronic distempers after purging, when he thought the blood was overcharged with a sort of moisture which he calls *ichor*; or in suppressions of urine, and when it was made in less quantity than it ought. There were also some cases in which he would force sweat as well as urine; in one passage, he mentions sweating, by pouring upon the head a great quantity of water till the feet sweat; that is, till the sweat diffuses itself over the whole body, running from head to foot. After this he would have them eat boiled meat, and drink pure wine, and being well covered with clothes, lie down to rest. The disease for which he proposes the above remedy, is a fever, produced by mere lassitude, or some similar cause; whence we may conclude that he did not approve of sweating in any other kind of fever. Other remedies which Hippocrates used were those that purge neither bile nor phlegm, but act by cooling, drying, heating, moistening, or by closing and thickening, resolving and dissipating; but he does not particularly mention them. To these he joined *hypnotics*, or such things as procure sleep; but these last were used very seldom, and, it is most probable, were only different preparations of poppies. Besides these medicines, which acted in a sensible manner, Hippocrates made use of others called *specifics*; whose action he did not understand, and for the use of which he could give no reason besides his own experience, or that of other physicians. These he had learned from his predecessors the descendants of Æsculapius, who, being *empirics*, did not inquire into the operation of their remedies, provided their patients were cured.

Of the external remedies prescribed by Hippocrates, fomentations were the chief. These were of two kinds. The one was a bath, in which the patient sat in a vessel full of a decoction of simples appropriated to his malady; so that the part affected was soaked in the decoction. This was chiefly used in distempers of the womb, the arms, bladder, reins, and all the parts below the diaphragm. The second way of fomenting was, to put warm water into a

1 Steph. Byzant. in voce *Syrna*.

skin or bladder, or even into a copper or earthen vessel, and apply it to the part affected. These are called *enast* fomentations. The dry ones were made of salt or millet, heated considerably, and applied to the part. Another kind of fomentation was the vapour of some hot liquor; an instance of which we find in his first book of Women's Distempers. He cast, at several times, bits of red hot iron into urine, and covering up the patient close, caused her to receive the steam below. His design in these fomentations was to warm the part, to resolve or dissipate, and draw out the peccant matter, to mollify and assuage pain, to open the passages, or to shut them, as the fomentations were emollient or astringent. Fumigations were likewise often used by Hippocrates. In the quinsy, he burned hyssop with sulphur and pitch, and caused the smoke to be drawn into the throat by a funnel; and thus brought away phlegm through the mouth and nose. He boiled nitre, marjoram, and cress seeds, in water, vinegar, and oil, and, while it was on the fire, caused the patient to draw in the steam by a pipe.

Gargles were also known to Hippocrates. In the quinsy he used a gargle of marjoram, savory, celery, mint, and nitre, boiled with water and a little vinegar. When this was strained, he added honey to it, and washed the mouths of his patients with it. Oils and ointments were likewise much used by him to abate pain, resolve tumours, refresh after weariness, make the body supple, &c. Sometimes pure oil of olives was used; sometimes certain simples were infused in it, as the leaves of myrtle and roses. Other oils were sometimes used, which were much more compounded. Hippocrates speaks of one called *susinum*, made of the flowers of the iris, of some aromatics, and of an ointment of narcissus, made with the flowers of narcissus and aromatics infused in oil. But the most compounded of all his ointments was netopion, which he made particularly for women; and consisted, says Hesychius, of a great number of ingredients. Another ointment, to which he gave the name of *ceratum*, was composed of oil and wax. An ointment which he recommends for softening a tumour, and cleansing a wound, was made by the following receipt: "Take the quantity of a nut of the marrow or fat of a sheep, of mastic or turpentine the quantity of a bean, and as much wax; melt these over a fire, with oil of roses, for a *ceratum*." Sometimes he added pitch and wax, and with a sufficient quantity of oil, made a composition somewhat more consistent than the former, which he called *ceroplasticum*. Cataplasms were made of powders or herbs steeped or boiled in water, or some other liquor, to which sometimes he added oil. They were used to soften or resolve tumours, ripen abscesses, &c. though he had also cooling cataplasms made of the leaves of beets or oak, fig or olive trees, boiled in water. To complete the catalogue of external remedies used by Hippocrates, we must mention his collyrium. It was compounded of powders, to which was added a small quantity of some ointment, or juice of a plant, to make a solid or dry mass; the form of which was long and round. Another composition was a sort of lozenge of the bigness of a small piece of money, which was burnt upon coals for a perfume, and powdered for particular use. In his works we find also descriptions of powders fit

a tempest upon the coasts of Caria, where he cured a daughter of king Damæthus, by bleeding her in both arms. The father, by way of reward, gave her to him in marriage. Among

other children, he had one called Hippolochus, from whom Hippocrates said he was descended. Pliny² supposes an interval of six or seven hundred years between the siege of Troy and

several uses, to take off fungous flesh, and to blow into the eyes in ophthalmies, &c.

These were almost all the external medicines used by Hippocrates. The compound medicines given inwardly were either liquid, solid, or lambative. The liquid were prepared either by decoction or infusion in a proper liquor, which, when strained, was kept for use; or by macerating certain powders in such liquors, and so taking them together, or by mixing different kinds of liquors together. The solid medicines consisted of juices inspissated; of gums, resins, or powders, made up with them or with honey, or something proper to give consistence to them, in a form and quantity fit to be swallowed with ease. The lambative was of a consistence between solid and fluid; and the patients were obliged to keep it for some time to dissolve in the mouth, that they might swallow it leisurely, to take off the acrimony of those humours which fall upon this part, and provoke coughing, &c. The basis of this last composition was honey. The compound medicines of Hippocrates were but few, and composed only of 4 or 5 ingredients; though he not only understood pharmacy, or the art of compounding medicines, but prepared such as he used himself, or caused his servants prepare them in his house by his directions.

Such is an account of the general principles and practice of Hippocrates. It is on his correct description of diseases, his sagacity in forming prognoses, and his skill in laying down the diagnostic symptoms, that his great reputation rests. He is said to have been the inventor of clinical medicine; and he is certainly the first writer of whom we have any correct information, who accurately stated the phenomena of disease, and generalized the symptoms of particular cases, so that we are able to recognise them from his description, although made so long ago, and under such different circumstances. Few of his principles were assumed *a priori*, which was not the case with his predecessors: he professed to derive his knowledge from experience, and to examine how far external circumstances actually affected the constitution and functions of the body. Although his execution is not in every instance equal to his design, yet he proceeded upon a correct method of investigation; and there are few among his numerous successors, until the middle of the last century, who kept hypothesis more in subjection to observation, or permitted theory to interfere less with practice. Of his anatomical knowledge, there has been some difference of opinion. Some of his commentators have not hesitated to ascribe to him an acquaintance with the structure of the body approaching to the accuracy of modern times, and it has even been asserted that he understood the circulation of the blood, as it was afterwards described by Harvey. But this is without foundation: and, indeed, there is reason to believe that his knowledge in this department was both very imperfect and very incorrect.

Hippocrates transmitted his art to his sons Thessalus and Draco, and to his son-in-law Polybus. They appear to have supported the credit of the family; but we do not learn that they made any important improvements in their profession. Diocles of Carystus is characterized by Le Clerc as the first physician who acquired any celebrity after Hippocrates; and next to him was Praxagoras of Cos, who was the last of the race of the Asclepiades that arrived at any distinguished eminence. Another physician of ancient Greece, that requires to be noticed, is,

2 Plin. l. 29. c. 1.

Chryssippus, who is said by Pliny to have "overthrown, by an extraordinary talent for argumentation, the maxims of the physicians that preceded him"—a remark which is confirmed by the account of Galen. Besides these, Aristotle requires to be mentioned, for his researches in the various sciences connected with medicine, and as the first among the ancients who advanced comparative anatomy and natural history to any considerable degree of perfection.

About a century after the death of Hippocrates, in consequence of the establishment of the library and museum at Alexandria, by the Ptolemies, the seat of medical knowledge was transferred from Greece to Egypt, and Alexandria retained for many ages its pre-eminence as a school of medicine. Erasistratus and Herophilus were among the earliest physicians of the Alexandrian school. Their names are recorded in conjunction with one another, as being the first who dissected the human subject, the bodies of criminals having been granted them by the king for this purpose. They ascertained many new and important facts respecting the brain and the nerves, and are stated to have discovered the valves of the heart; but it does not appear that their physiology and pathology were much improved by their anatomical discoveries.

There arose, about this period, two rival sects in medicine, which were the occasion of long and warm controversy among the ancients. These were the Dogmatists and Empirics. The great point of dispute between them was, how far we are to introduce theory into medicine, or in what degree it is to influence our practice. The Empirics admitted only one general method of obtaining skill in the medical art, namely, by *experience*. From this word they took their name. Personal observation or the testimony of others was their sole guide. They considered themselves enabled to know a disease by its resemblance to others; and, when new diseases occurred, to conclude what was proper to be done from the symptoms they had in common with others before known. The Dogmatists, on the other hand, or, as they are sometimes called, the Rationalists, affirmed, that there was a necessity for knowing the latent as well as the evident causes of diseases; and that the physician ought to understand the natural actions and functions of the human body by a knowledge of the internal parts. It is not easy to determine with certainty to whom these sects owe their origin. The Dogmatists have been anxious to claim Hippocrates as their founder; but although he often employed theoretical reasoning to illustrate or explain his practice, yet his leading principle was always to prefer observation to hypothesis, and to make experience his guide, whenever it could be obtained. We are informed, however, that his sons or descendants were less cautious in this respect; and it seems to have been the general opinion among the ancients that to them the Dogmatists owe their origin. Celsus mentions Serapion of Alexandria as the first who decisively supported the doctrine of the Empirics, that theoretical reasoning is of no avail in medicine, and that our sole dependance is to be placed upon practical experience; but it is not precisely determined at what period Serapion lived, nor there much known respecting his history. Most of

the Peloponnesian war, that is to say, the time of Hippocrates: which is not quite exact. Celsus¹ places Pythagoras, who lived in the time of Cyrus and his two successors, and some

other philosophers, as Empedocles and Democritus, in the number of celebrated physicians.

Physicians are distinguished into different classes and sects. Some are called *Empirics*,

1 Cels. in Præf.

ancient physicians secta to have attached themselves to one or other of these sects, but it happens, that the works of all the professed Empirics have perished; so that the reasoning which they contained is only known through the statements of their adversaries. A general view of the controversy has been drawn up by Celsus, to which the curious reader is referred.* His conclusion is candid and judicious—that each of the sects, in the extreme, is objectionable, and that the true plan of proceeding consists in maintaining a medium between the two.

A circumstance in the history of medicine, perhaps more really important than the controversy between the Dogmatists and the Empirics, took place about the same period—the division of the art into three branches, viz. the dietetic, the pharmaceutical, and the surgical. The first related to regimen and general management in the cure of diseases; the second to medicines; and the third to the operation of hands. Hitherto the whole had been exercised by one person; but they now came to be followed as separate professions, and were the origin of our present distinction of physician, apothecary, and surgeon.

While the school of Alexandria supported its credit for several centuries, and produced a succession of learned men who each contributed his share to the perfection of the art, the practice of medicine at Rome was but little encouraged, and seems to have long remained in a barbarous state. According to Pliny, the first individual who rose to distinction in the profession, at Rome, was Archagathus, a native of Peloponnesus. He came to Italy about 200 years before Christ, and was at first received by the Romans with great respect, and had even a residence assigned him at the public expense; but his frequent use of the knife and caustics rendered him unpopular, and this unpopularity extended itself to the profession at large. The next remarkable practitioner at Rome was Asclepiades, who flourished in the century immediately before the Christian era. He was a native of Bithynia, and originally settled at Rome as a teacher of rhetoric; but not meeting with success in that line, he turned his attention to physic. He began by decrying the principles and practice of all his predecessors, and particularly directed his attack against the patient researches of Hippocrates into the symptoms and phenomena of disease. He formed a new theory of pathology, which was derived from the corpuscularian philosophy of Epicurus, the fundamental doctrine of which was, that the body consists of a system of atoms and pores, and that disease is produced by obstruction of the pores, or the irregular distribution of the atoms. He had the discretion to refrain from the use of active remedies; and he seems, for the most part, to have depended principally upon diet, exercise, baths, and frictions. He is said to have been the first who prescribed wine to his patients; from which circumstance, and probably also from the credit which mankind are disposed to give to those who have sufficient assurance to set a high value upon their own abilities, he acquired a great degree of reputation, and left behind him a sect which long retained its popularity.

Themison, his pupil, a native of Laodicea, who lived a

short time before Celsus, about the end of the reign of Augustus or beginning of that of Tiberius, had the honour of establishing a new sect, which, for a considerable time, divided the empire of opinion with the Dogmatists and Empirics. It was styled the *Methodic sect*, because, as is said, he endeavoured to find a method of rendering medicine more easy than formerly. He divided all diseases into three kinds—those arising from constriction of the body—those from relaxation—and those of a mixed nature, or such as partook both of constriction and relaxation. To this arrangement of diseases, it has been justly objected, that, even admitting the correctness of his principles, with respect to the existence of the states of constriction and relaxation, yet we are unable to form any conception how the two could exist at the same time; for it does not appear that, by his mixed diseases, he seemed to designate those where there was an irregularity in the different parts of the body, or in different organs, but that he considered this mixed state as pervading the whole system.

Themison was old when he laid the foundation of the Methodic sect; but it became the prevailing system at Rome under different modifications. Thessalus, who lived under Nero, professed to carry it to a state of perfection, while he stripped it of a great part of what constituted its distinguishing characteristics. Galen and Pliny accuse this physician of intolerable insolence and vanity—an accusation borne out by the title he assumed of Conqueror of Physicians, which he caused to be put on his tomb in the Appian way.

Among the most eminent supporters of the Methodic system were Soranus and Caelius Aurelianus. Little is known respecting either. Soranus is said to have been a native of Ephesus, to have resided some time at Alexandria, where he probably acquired his medical knowledge, and finally to have settled at Rome. All his writings are supposed to have perished: the anatomical treatise on the uterus, which is extant under his name, is attributed to another Soranus. But the loss of these writings is the less to be regretted, as much of the information which they contained has been transmitted to us by Caelius Aurelianus, who flourished in the first century after Christ, and whose work is valuable not only as affording a complete view of the opinions and practice of the Methodic sect, but as embracing a great variety of observations respecting the phenomena of disease.

The innovations which were made on the Methodic system, in the course of time, divided its followers into two or more separate sects. Of these the most noted were the *Episynthetic*, the *Eclectic*, and the *Pneumatic*. It seems, however, not to be certainly ascertained, whether the two former of these are entitled to the appellation of distinct sects, or whether both these denominations do not refer to the same system. From what we know of their tenets, we learn that they did not profess to have discovered any new principles, or to have projected any improvement in theory, but to have founded their doctrines upon the judicious selection which they made from the opinions and practices of others. They seem, indeed, to have approached to the physicians of our own times: they had no prevailing hypothesis, or at least none upon which they laid much stress; but they rather employed themselves in collecting facts and observations from all quarters, and arranged them according to their practical application. The *Pneumatics*, although

* See also Galen, de Subfrig. Empir. and Le Clerc, Hist. Med. part ii. lib. 2.

because they followed experience almost entirely in their practice. Others, of whom Hippocrates was the chief, joined reason with experience, which kind of physic took the name of *Dog-*

matic or *Rational* from them. Some affected to depart from all other physicians, and to follow a peculiar method of their own: these were called the *Methodists*. I shall not confine myself

generally classed as a sect emanating from the Methodic system, seem scarcely to have any claim to be considered in this light; for, from the scanty materials which are left of them, they do not seem to have insisted upon the leading point of constriction and relaxation, nor, in general, to have embraced those opinions which characterized the acknowledged disciples of Themison. They derived their name from the introduction of what they call *spirit* into their pathology, which they regarded as the fifth element, in addition to the four recognized by the Greek philosophers. What distinct idea they attached to the term *spirit* cannot be ascertained. Little, indeed, is known of the sect in general; and it seems never to have risen to any considerable degree of reputation.

Celsus and Aretæus, two methodical writers of eminence, are placed among the Eclectics. The former lived under Tiberius; and is the first native of Rome, whose writings, on any medical topic, have been preserved. His style possesses so much of the purity of the Augustan age, that it has served as a model of Latinity to all modern physicians. He has borrowed largely from Hippocrates, and has shown that he was fully sensible of his merits as an accurate observer of morbid symptoms; but the author to whom he most frequently refers, and whom he appears, upon the whole, to have regarded as the highest authority, is Asclepiades. He, however, states the opinions and practice of different writers with so much candour, and is guided so much more by a judicious examination of the respective merits of each of them, than by a zealous devotion to any one hypothesis, that to none of the ancients is the title of Eclectic more justly applicable. Of Aretæus little is known. He has currently obtained the name of the Cappadocian, from the supposed place of his nativity, although he is said to have practised at Rome; and the most probable conjecture seems to be, that he lived about the time of Vespasian. He wrote a general treatise on diseases; and he is inferior to none of the writers of antiquity in his description of symptoms, and particularly in the accuracy of his diagnostics. His practice, in its general features, resembles that of Hippocrates, being distinguished for its simplicity, and not much encumbered with refined speculation; but he paid much less attention to the natural actions of the system, and, on many occasions, did not scruple to interfere with, or entirely to counteract them.

It is observed by Pliny, that all the physicians, except Celsus, who distinguished themselves at Rome were foreigners, principally from the different parts of Greece and Asia Minor. This circumstance may be attributed partly to the little progress which natural philosophy and all the collateral branches of knowledge had made among the Romans, and partly to the peculiar constitution of their society, by which it was considered as degrading for a free-born citizen to exercise any art for the purpose of pecuniary gain. On this account, we find that slaves, or those who had formerly been slaves, embraced the profession of medicine, and many of them rose to considerable eminence. Among these were Antonius Musa, noticed in the text, and Scribonius Largus, author of a work, written in impure Latin, entitled, "On the Composition of Medicine," and consisting of a collection of prescriptions and nostrums of all kinds, placed together without arrangement or discrimination. Andromachus, a native of Crete, obtained, about this time, a great reputation for his prescriptions and formulae, particularly for

a compound medicine, called the *theriac*, which he held out as an universal panacea for all diseases. The reputation of this compound was not confined to the age of its discovery: amidst all the revolutions of theory and practice, it still maintained its ground in the public estimation, so that even half a century ago, it was admitted into pharmacopœias, very nearly in the same form in which it had been composed seventeen centuries before. Opium and aromatics were its principal ingredients. It is now entirely disused. Andromachus enjoyed the title of Achiater, which is supposed to have signified the principal physician attached to the establishment of the emperor.

Rufus, usually called the Ephesian, was a physician of this period, some of whose works are extant—one, a small treatise on anatomy, one on the diseases of the urinary organs, and a fragment of one on purgative medicines. This author, when pointing out the most eligible method of studying anatomy, recommends his pupils to select those animals which are the most similar to man in their form, as the best expedient for acquiring a competent knowledge of the human subject. He adds, that *formerly* the human body itself was employed in anatomical demonstrations, from which it seems a very obvious conclusion, that such demonstrations were not practised in his time.

Pliny and Dioscorides are the only names of this period that remain to be mentioned in the present slight sketch. To the researches of the former, the *materia medica* was much indebted—and it is as a contributor to the same division of the art, that the latter is here noticed. Dioscorides is said to have been a native of Asia Minor, and to have pursued medicine as a regular profession; but scarcely any thing is known of his personal history. He wrote a treatise on the *materia medica*, which obtained a high degree of reputation in the time when it was published, and maintained its credit through many centuries, until the greater correctness of modern science has rendered it more an object of curiosity than of real value.

In the second century of the Christian era arose Galen of Pergamus—the most celebrated medical character of antiquity, not excepting Hippocrates. Rollin has given in the text the particulars of his life. He was a man of extraordinary powers of mind, and of very considerable acquirements. He wrote much upon all topics connected with his profession, delivered his opinions with great confidence, and treated his antagonists and rivals with little ceremony, and even with arrogance. For 1,300 years after his death, no one dared to oppose his authority, either in point of fact or hypothesis; and it was even considered a kind of heresy to pass over the limits of investigation which he had assigned to medicine. Of his principles and practice, the following account, from a source already acknowledged, in speaking of Hippocrates, may be given.

At the time when he appeared, the Dogmatic, Empiric, Methodic, and other sects, had each their abettors. The Methodics were held in great esteem, and reckoned superior to the Dogmatists, who were strangely divided, some following Hippocrates, others Erasistratus, and others Asclepiades. The empirics made the least considerable figure. Galen undertook the reformation of medicine, and restored Dogmatism. He seems to have been of that sect called Eclectic, from their choosing out of different authors what they esteemed good in them, without being

scrupulously to this division. I shall only follow the order of time, and speak of such physicians as were most known. All the different sects of physicians, for there is a great

number of them, are learnedly treated in Mr. Daniel le Clerc's *History of Physic*, a work of profound erudition.

DEMOCEDES of Crotona gave proofs of his

particularly attached to any one. This declaration he indeed sets out with, yet he follows Hippocrates much more than any of the rest. Though before his time several physicians had commented on the works of Hippocrates, yet Galen says that none of them had understood his meaning. His first attempt, therefore, was to explain the works of Hippocrates, and next to compose a system of his own. In his book, entitled, *Of the establishment of medicine*, he defines the art to be one which teaches to preserve health and cure diseases. In another book, however, he gives the following definition: "Medicine," says he, "is a science which teaches what is sound, and what is not so; and what is of an indifferent nature, or holds a medium between what is sound and what is the reverse." He affirms, that there are three things which constitute the objects of medicine, and which the physician ought to consider as sound, as not sound, or of a neutral and indifferent nature. These are the body itself, the signs, and the causes. He esteems the human body sound when it is in a good state with regard to the simple parts of which it is composed, and when there is a just proportion between the organs formed of these simple parts. On the contrary, the body is unsound when it recedes from this state, and the just proportion above mentioned. It is in a state of indifference, when it is in a medium between soundness and its opposite state. The salutary signs are such as indicate present health, and prognosticate that the man may remain in that state for some time to come. The insalubrious signs indicate a present disorder, or give cause for suspecting the approach of one. The neutral or indifferent signs denote neither health nor indisposition, either for the present or the future. In like manner, he speaks of causes salutary, unsalutary, and indifferent.

These three dispositions of the body, its soundness, the reverse, and a neutral state, comprehend, according to Galen, all the differences between health and disease. A perfectly sound habit of body is very rare, perhaps never to be met with; but such a model may be supposed for regulating our judgment with respect to different constitutions. On this principle Galen establishes eight other principal constitutions, all of which differ more or less from the perfect model. The four first are such as have one of the four qualities of hot, cold, moist, or dry, prevailing in too great a degree; and receive their denomination from that quality which prevails most. The four other species receive their denominations from a combination of the above mentioned; so that, according to his definition, there may be a hot and dry, a hot and moist, a cold and moist, and a cold and dry, constitution. Besides these differences, there are others, resulting from occult and latent causes, which, by Galen, are said to arise from an *idiosyncrasy* of constitution. Owing to this idiosyncrasy, some have an aversion to one kind of aliment and some to another; some cannot endure particular smells, &c. But though these eight last mentioned constitutions fall short of the perfection of the first, it does not follow, that those to whom they belong are to be classed among the valetudinary and diseased. A disease only begins when the deviation becomes so great as to hinder the action of the parts.

Galen describes, at great length, the signs of a good or bad constitution, as well as those of what he calls a *neutral habit*. These signs are drawn from the original qualities of cold, hot, moist, and dry, and from their just

proportion or disproportion with respect to the bulk, figure, and situation of the organical parts. With Hippocrates, he establishes three principles of an animal body; the parts, the humours, and the spirits. By the parts, he properly meant no more than the solid parts; and these he divided into *similar* and *organical*. Like Hippocrates, he also acknowledges four humours; the blood, the phlegm, the yellow bile, and black bile. He establishes three different kinds of spirits; the natural, the vital, and the animal. The first are, according to him, nothing but a subtle vapour arising from the blood, which draws its origin from the liver, the organ of sanguification. After these spirits are conveyed to the heart, they, in conjunction with the air we draw into the lungs, become the matter of the second species, that is, of the vital spirits, which are again changed into those of the animal kind in the brain. He supposed that these three species of spirits served as instruments to three kinds of faculties, which reside in the respective parts where these faculties are formed. The natural faculty is the first of these, which he placed in the liver, and imagined to preside over the nutrition, growth, and generation, of the animal. The vital faculty he lodged in the heart, and supposed that by means of the arteries it communicated warmth and life to all the body. The animal faculty, the noblest of all the three, and with which the reasoning or governing faculty was joined, according to him, has its seat in the brain; and by means of the nerves, distributes a power of motion and sensation to all the parts, and presides over all the other faculties. The original source or principle of motion in all these faculties, Galen, as well as Hippocrates, defines to be Nature.

Upon these principles Galen defined a disease to be "such a preternatural disposition or affection of the parts of the body, as primarily, and of itself, hinders their natural and proper action." He established three principal kinds of diseases: the first relating to the similar parts; the second, to the organical; and the third common to both. The first kind of disease consists in the intemperature of the similar parts; and this is divided into an intemperature *without matter*, and an intemperature *with matter*. The first discovers itself when a part has more or less heat or cold than it ought to have, without that change of quality in the part being supported and maintained by any matter. Thus, a person's head may be overheated and indisposed by being exposed to the heat of the sun, without that heat being maintained by the continuance or congestion of any hot humour in the part. The second sort of intemperature is when any part is not only rendered hot or cold, but also filled with a hot or cold humour, which are the causes of the heat or cold felt in the part. Galen acknowledged a simple intemperature: that is, when one of the original qualities, such as heat or cold, exceeds alone and separately; and a compound intemperature, when two qualities are joined together, such as heat and dryness, or coldness and humidity. He also established an equal and unequal intemperature. The former is that which is equally in all the body, or in any particular part of it, and which creates no pain, because it has become habitual, such as dryness in the hectic constitution. The latter is distinguished from the former, in that it does not equally subsist in the whole of the body, or in the whole of a part. Of this kind of intemperature we have examples in certain fevers, where heat and cold, equally, and almost at the same

skill, in restoring sleep and health to king Darius, (Ant. J. C. 519.) whom a sprain of the foot, occasioned by a fall from his horse, kept perpetually awake, and in excess-

time, attack the same part; or in other fevers, which render the surface of the body cold as ice, while the internal parts burn with heat; or, lastly, in cases where the stomach is cold and the liver hot.

The second kind of disorders, relating to the organical parts, results, according to Galen, from irregularities of these parts, with respect to the number, bulk, figure, situation, &c.; as when one has six fingers, or only four; when one has any part larger or smaller than it ought to be, &c. The third kind, which is common both to the similar and the organical parts, is a solution of continuity, which happens when any similar or compound part is cut, bruised, or corroded.

Galen, like Hippocrates, distinguished diseases into acute and chronic; and, with respect to their nature and genius, into benign and malignant; also into epidemic, endemic, and sporadic. After distinguishing the kinds of diseases, Galen explains the causes; which he divides into *external* and *internal*. The external causes, according to him, which contribute to preserve health when properly used, but produce a contrary effect when imprudently used or ill disposed, are, air, aliments and drink, motion and rest, sleeping and watching, retention and excretion, and the passions. All these are called the *procatartec* or *beginning* causes, because they put in motion the internal causes; which are of two kinds, the *antecedent* and the *concurrent*. The former is discovered only by reasoning; and consists, for the most part, in a peccancy of the humours, either by plenitude or cacochymy, i. e. a bad state of them. When the humours are in too large a quantity, the case is called a *plethora*; but we must observe, that this word equally denotes too large a quantity of all the humours together, or a redundancy of one particular humour which prevails over the rest. According to these principles, there may be a sanguine, a bilious, a pituitous, or a melancholy plenitude; but there is this difference between the sanguine and the three other plenitudes, that the blood, which is the matter of the former, may far surpass the rest; whereas, if any of the three last mentioned ones do so, the case is no longer called *plenitude*, but *cacochymy*; because these humours, abounding more than they ought, corrupt the blood. The causes he also divides into such as are manifest and evident, such as are latent and obscure, and such as are occult or concealed. The first are such as spontaneously come under the cognizance of our senses when they act or produce their effects: the second are not of themselves perceptible, but may be discovered by reasoning: the third sort, i. e. such as he calls *occult* or *concealed*, cannot be discovered at all. Among this last he places the cause of the hydrophobia.

He next considers the symptoms of diseases. A symptom he defines to be "a preternatural affection depending upon a disease, or which follows it as a shadow does a body." He acknowledged three kinds of symptoms; the first and most considerable consisted in the action of the parts being injured or hindered; the second in a change of the quality of the parts, their actions in the meantime remaining entire; the third related to defects in point of excretion and retention.

Galen next treats of the signs of diseases. These are divided into *diagnostic* and *prognostic*. The first are so called because they enable us to know diseases, and distinguish them from each other. They are of two sorts, *pathognomonic* and *adjunct*. The first are peculiar to

some pain, which the physicians of the country were not able to remove. He afterwards cured the queen Atossa of an ulcer, which she had long concealed out of modesty. I have

every disease, make known its precise species, and always accompany it, so that they begin and end with it. The second are common to several diseases, and only serve to point out the difference between diseases of the same species. In a pleurisy, for instance, the pathognomonic signs are a cough, difficulty of breathing, a pain of the side, and a continued fever; the adjunct signs are the various sorts of matter expectorated, which are sometimes bloody, sometimes bilious, &c. The diagnostic signs were drawn, 1st, from the defective or disordered disposition of the parts, or from the diseases themselves; 2dly, from the causes of diseases; 3dly, from their symptoms; and, lastly, from the particular dispositions of each body, from things which prove prejudicial and those that do service, and from epidemical diseases. The prognostic signs he gathered from the species, virulence, and peculiar genus of the disease. His method of cure differed little from that of Hippocrates; but from the specimen already given of Galen's method of teaching the medical art, it is evident that his system was little else than a collection of speculations, distinctions, and reasonings; whereas that of Hippocrates was founded immediately upon facts, which he had either observed himself, or had learned from the observation of others.

Galen's system, however, notwithstanding its defects and absurdities, retained its ascendancy, as we have already said, for a very long period. But during its general prevalence, there appeared some writers to whom medicine was indebted for improvements, at least in certain particulars. Among the most distinguished of these were Sextus Empiricus, Oribasius, Aetius, Alexander, and Paulus.

All these were natives either of Greece or Asia Minor, and wrote in the Greek language. Sextus Empiricus was probably a contemporary of Galen's, and received his surname, it is thought, in consequence of the tenets which he adopted. He may be regarded as the last scientific defender of the Empiric sect; for after this period, the authority of Galen conspired with the character of the age, to turn the current of fashion in favour of abstruse speculations, and all the subtleties of scholastic learning. Oribasius, who was a native of Pergamus, flourished about the end of the fourth century; and Aetius lived a century later. Both their writings consist chiefly of compilations from Galen and other authors. Alexander, named from the place of his birth Trallianus, lived about the middle of the sixth century; and Paulus of Ægina was nearly contemporary with him. Their writings, though principally compilations, are not without originality both with respect to facts and opinions. Paulus particularly excels in the description of surgical operations. With these two last writers terminated the ancient Greek medicine; for after this period, neither Greece nor Asia Minor produced a single medical writer of any degree of eminence. If we except from this century the name of Actuarius, who lived about the eleventh century, it is rather from the circumstance of his works containing the first hint of the application of chemistry to medicine, than from their intrinsic merit. It is not easy to ascertain when the first operation was practised to which we may apply the term chemical. Something of the kind may be met with in the pharmaceutical writings that were published about the commencement of the Christian era; but they are mentioned in an incidental manner, and can scarcely be considered as even approaching to the formation of a new branch of science.—Ed.

related this physician's history, with that of Darius.

HEROPHILUS acquired also great fame by physic, A. M. 3704, Ant. J. C. 300. He made much use of botany, and still more of anatomy, in which he made great improvements.¹ The princes permitted him to dissect the living bodies of condemned criminals, of whom a great number passed through his hands. This made Tertullian call him an executioner rather than a physician.²

HERODICUS of Sicily, flourished under Artaxerxes Longimanus, A. M. 3540, Ant. J. C. 464. The sect called *Διατριβη*, from using scarce any remedy except diet and a regimen of life, acknowledged him their chief; as well as that called the *Gymnastic* sect, from making great use of the exercise of the body for restoring and confirming health.³ He was the brother of the famous rhetorician Gorgias; but is best known by one of his disciples.

HIPPOCRATES, of the Island of Cos, is that illustrious disciple. His birth is dated the first year of the 80th Olympiad, A. M. 3544, Ant. J. C. 460. He is said to have descended from Æsculapius by Heraclides his father, and from Hercules by his mother Praxitea. He first applied himself to the study of natural things in general, and afterwards to that of the human body in particular. His own father was his first master. He also received lessons from another celebrated physician, Herodicus, of whom I spoke last. He made a great proficiency in all the parts of physic, and carried the knowledge of it as high as was possible in those days.

I have already said that he was born at Cos. That island was consecrated to the god Æsculapius, who was adored there in a particular manner. It was a custom for all, who had been cured of any distemper, to make an exact memorandum of the symptoms that had attended it, and the remedies by which they had been relieved. Hippocrates had caused all these accounts to be copied, which were of no small advantage to him, and served him instead of a great length of experience.

His vast capacity appeared in a peculiar manner during the plague, that raged particularly in the city of Athens and throughout Attica during the Peloponnesian war, A. M. 3574, Ant. J. C. 430. I have related elsewhere his great zeal and devotion for the preservation of his country, the noble disinterestedness which

induced him to refuse the advantageous offers of the king of Persia, and the extraordinary honours with which Greece thought it incumbent upon itself to reward the important services he had rendered it.

The people of Abera are said to have wrote to Hippocrates, desiring him to come thither to visit Democritus. They saw that philosopher regardless of every thing, laugh at every thing, say that the air was full of images, and boast that he made voyages into the vast immense of things. Considering all this as so many symptoms and beginnings of frenzy, they were afraid he would run mad, and that his great learning would entirely turn his brain. Hippocrates set them right, and judged very differently of Democritus's condition. It is not certain that the letters ascribed to Hippocrates, whence this fact is taken, are genuine.

The writings which he left behind him in a great number, have always been and still are considered, as a very excellent and proper foundation for the study of physic. He has preserved the remembrance of an event in them, which says much for his ingenuousness. It is the sincere confession of an error, which he had committed in dressing a wound in the head: for anciently, as we have observed, physic, surgery, and pharmacy, were not distinct professions. He is not ashamed to own, at the expense in some measure of his glory, that he was mistaken; lest others, after him and by his example, should fall into the same error.⁴ Little minds, says Celsus, and men of vulgar abilities, do not act in this manner, but are much more careful of the small reputation they have, because they can lose nothing without impoverishing themselves. Only great geniuses, conscious themselves of the abundance they otherwise possess, are capable of such a confession, and of neglecting the little losses, that diminish nothing of their riches and opulence. He makes also another confession, that argues an admirable spirit of candour and ingenuity. Of forty-two patients, whose distempers he describes in his first and third books upon *epidemic diseases*, he owns that he cured only seventeen, that the rest died under his hands. In the second book of the same work, speaking of a kind of quinsy attended with dangerous symptoms, he says, that all his patients recovered. "Had they died,"

1 Gallen. Comment. li. in lib. Hippoc.

2 Herophilus ille medicus, aut lanus, qui sexcentos execut, ut naturam scrutaretur: qui homines odit, ut vocet. Tertul. lib. de anima, c. 10.

3 Eustath. in Iliad.

4 De futuris se deceptum esse Hippocrates memorie prodidit, more magnorum virorum, et fiduciam magnarum rerum habentium. Nam levia ingenia, quia nihil habent, nihil sibi detrahunt. Magno ingenio, multaque nihilominus habitu, convenit etiam veri erroris confessio, præcipue in eo ministerio, quod utilitatis causa posteris traditur, ne qui decipiantur eadem ratione qua quis deceptus est. Cels. l. viii. c. 4.

adds he, "I should have said so with the same freedom." In another place,^b he complains modestly of the injustice of those who cry down physic, under the pretence, that many people die in the hands of physicians—as if, says he, the death of the patient might not be imputed to the insurmountable violence of the distemper, as much, or rather more, than to the fault of the physician. He declares,^c that it is no dishonour to a physician, when he is at a loss how to act in certain difficult cases, to call in other physicians, in order to consult with them upon what is necessary to be done for the patient's good. Whence we see that such consultations are an ancient custom.

The character of a truly honest man and one of the greatest probity, appears in the oath of Hippocrates, with which he introduces his works. He calls the gods, who preside over physic, to witness the sincere desire he has to discharge exactly all the duties of his station. He expresses a warm and respectful gratitude for him who taught him the art of physic, and declares that he shall always consider him as his father, and his children as his own brothers, whom he shall make it his duty to assist upon all occasions, both with his fortune and advice. He protests, that in the regimen which he shall prescribe for the sick, he shall take great care to consult what may be best for them, and to avoid whatever may be to their prejudice. He proposes to himself the leading of a pure and irreproachable life, and not to dishonour his profession by any action worthy of blame. He says that he shall never undertake to cut for the stone, and shall leave that operation to persons whom long experience has rendered dexterous at it. He protests that, if in visiting his patients or otherwise, he shall discover any thing which ought to be concealed, that he will never reveal it, but will inviolably observe the sacred law of secrecy. And lastly, he hopes, by his punctual attachment to all these rules, that he shall acquire the esteem of posterity, and consents to forfeit the good opinion of the world for ever, if he is so unfortunate as to depart from them.

He is highly praised for his disinterestedness, a most estimable virtue in a physician. What he says upon this subject, is worthy of remark. He is for having the physician act, in respect to his fees, with honour and humanity, and regulate them by the patient's power to reward them more or less liberally.^d There are even occasions, says he, in which a physician ought neither to ask nor to expect reward; as in the cases of strangers and the poor, whom all the world are

obliged to assist. He appears to have been full of respect for the Divinity.^e "Those," says he, "who first discovered the manner of curing diseases, believed it an art, of which the invention ought to be attributed to God." I have already observed elsewhere, that Cleoro was of the same opinion. *Deorum immortalium inventioni consecrata est ars medica.*^f

Nothing is particularly known of the death of Hippocrates. He died at a very advanced age, and left two sons, Thessalus and Draco, who acquired great reputation among the physicians, as well as Polybius his son-in-law and successor.

I have spoken, in the history of Philip, of the ridiculous vanity of a physician called Menecrates, whom that prince treated as he deserved.

PHILIP of Acarnania is known from the salutary draught he gave Alexander the Great, which saved his life, at a time when endeavours had been used to render that physician suspected, A. M. 3671, Ant. J. C. 333.

ERASTRATUS made himself known and esteemed by his address in discovering the cause of the sickness of Antiochus Soter,^g the son of Seleucus king of Syria. I have related the fact in its place. If Pliny^h may be believed, that wonderful cure which restored a tenderly beloved son to his father, was rewarded with an hundred talents, that is to say, an hundred thousand crowns.

APOLLOPHANES, physician to Antiochus surnamed the Great, was very learned in his profession; but became still more famous by the important service which he rendered his master, A. M. 3785, Ant. J. C. 219. Herminas, the first minister of that prince, committed unheard of extortions and oppressions, and had rendered himself so terrible, that nobody dared lay their complaints before the court. Apollophanes had so much love for the public good, as not to fear risking his fortune for it. He discovered the general discontent of the kingdom to the king, and left that lesson to physicians, upon the use they ought to make of their freedom of access to princes.

MITHRIDATES, who was so long the terror of the Romans, distinguished himself highly in physic, (A. M. 3880, Ant. J. C. 134,) not only by the invention of the antidote that still bears his name, but the composition of several learned works, which Pompey made Lenæus his freed-man translate into Latin.

ASCLEPIADES of Bithynia, who at first taught eloquence at Rome, A. M. 3920, Ant. J. C. 84, quitted the profession of a rhetorician to take up

^b 1. Ab. de arte.

^c 1. Lib. præreptionum.

^d 1. In Lib. præreptionum.

^e De prisce. medic.

^f 1. Tusc. Quest. l. III.

^g 1. Val. Max. l. v. c. 7.

^h 1. Plin. l. xxix. in Proem.

that of a physician, which he believed more profitable than the other, and was not mistaken.¹ He introduced an entire change in the practice observed before him, and departed almost in every thing from the principles and rules of Hippocrates. To solid and profound knowledge he substituted the insinuation and repute of a fine speaker, which often pass for merit with the sick. He also made it his business to flatter their taste, and gratify their desires to the utmost of his power, a certain means for gaining their confidence. His maxim was, That a physician ought to cure his patients, *safely, soon, and agreeably.*² This practice were much to be desired, says Celsus. But the misfortune is, that to endeavour to cure too soon, and to prescribe nothing but what is agreeable, are generally attended with great danger. What contributed most to bring him into vogue, was his luckily meeting a party going to inter a man, in whom he found some remains of life, and whom he restored to perfect health.³ Pliny often mentions this physician, but with very little respect.

THEMISON, the disciple of Asclepiades, was a native of Laodicea, A. M. 4000, Ant. J. C. 4. He made some alteration in his master's system, when he was old. The sect which he formed, was called the *Methodic sect*, because he thought proper to establish a method for rendering physic more easy to learn and practise. Juvenal does not speak in his favour.

Quot Themison agros autumnno occiderit uno.

Sat. 10. l. iv.

—As many, with his pills
As in one autumn learn'd Themison kills.

Cicero and Horace mention Craterus as a learned physician.

DIOSCORIDES (*Pedacius*) was a physician of Anazarba, a city of Cilicia, in the first century. Vossius, after Suidas, says, that he was physician to Anthony and Cleopatra. It is believed that they confound him with another Dioscorides, surnamed *Phacas*. The person meant here might live in Vespasian's time. Some of the learned have disputed, whether Pliny copied Dioscorides, or the latter extracted his work from Pliny. These two authors wrote at the same time, and upon the same subjects, without ever citing each other. The subject treated by Dioscorides, is the *Materia Medica*, the matter or elements of medicine. All bodies used in physic are so called, and are principally reduced

to three species: plants, animals, and minerals, or things of the nature of the earth.

ANTONIUS MUSA, the freedman, physician of the emperor Augustus, cured him of a dangerous distemper, which had reduced him to the last extremity, by treating him in a manner quite different to what had been used before, and making him use cold baths, and refreshing draughts.⁴ This happy cure, besides the great presents made him by the emperor and the senate, acquired Musa the privilege of wearing a gold ring, which till then had been granted only to persons of the first condition. All physicians, on Musa's account, were exempted from all taxes for ever. The Roman people, to express their gratitude, caused a statue to be erected to him near that of Æsculapius. He took the same method with Horace, and made him use the cold bath in the midst of winter.⁵

CORNELIUS CELSUS is believed to have lived in the reign of Tiberius. He was very learned, and had wrote upon all kinds of subjects. Quintilian,⁶ who highly extols his erudition, terms him however only an indifferent genius: *Cornelius Celsus, mediocri vir ingenio.* I do not know whether the physicians agree with him in this point. We have eight books of his upon physic, which are wrote in very good Latin.

GALEN, the most celebrated of physicians next to Hippocrates, was of Pergamus. He lived in the reigns of Antoninus, Marcus Aurelius, and some other emperors, A. D. 131. He was educated with great care in the study of polite learning, philosophy, and the mathematics. When he had made choice of the profession of physic, he devoted himself entirely to it, went to many of the cities of Greece to receive lessons from the most famous masters in that science, and continued particularly at Alexandria in Egypt, where the study of physic flourished at that time more than in any other part of the world. When he returned into his own country, he knew how to make great use of the precious treasures of learning which he had collected in his travels. His principal application was in studying Hippocrates, whom he always considered as his master, and in whose steps he thought it his honour and duty to tread. He received his principles in all their force, which had been neglected and left in oblivion above six hundred years.

He went to Rome at the age of thirty-four, where he acquired great reputation, and at the

4 Sueton, in Aug. c. 81. Dion. Cass. l. liii. p. 517.

5 —Nam mihi Balas

Musa supervacuas Antonius, et tamen illis

Me facit invisum, gelida cùm perfuor unda

Per medium frigus. Epist. 13. l. 1.

6 L. xii. c. 11.

1 Plin. l. xxvi. c. 3.

2 Asclepiades officium esse medici dicit, ut tutò, celeritèr, et jucundè curet. Id votum est; sed sere periculosa esse nimia et festinatio et voluptas solet. Cels. l. lii. c. 4.

3 Apul. l. iv. Florid.

same time drew upon himself no less envy from the other physicians. His extraordinary cures of patients absolutely given over, his sagacity in discovering the true causes of distempers that had escaped others, the certainty with which he often foretold all the symptoms that were to happen, the effect his remedies would produce, and the time in which a perfect cure would be effected; all this occasioned his being considered, on the one side, by the unprejudiced, as a physician of extraordinary learning and talents; and on the other, by his jealous brethren, as a man who performed all his operations by the assistance of magic. At least they spread that report to depreciate him, if possible, in the opinion of the people and the great.

The plague, which happened some years after, A. D. 166, and which made horrible ravages throughout Italy and in many other provinces, determined him to return into his country. If it was to take care of the people, his design was very generous and laudable. He did not continue long there. M. Aurelius, at his return from his expedition against the Gerizans, A. D. 170, ordered him to Aquileia, whence he afterwards brought him in his train to Rome. The emperor reposed great confidence in him. The rigid life which that prince led, had very much impaired his health. He took a preparation of treacle every day to strengthen his stomach and lungs, which were very weak: this Galen made up for him. To this remedy the health he generally enjoyed, notwithstanding his great weakness, was attributed. That prince, intending to return into Germany, was extremely desirous of carrying Galen thither with him, whose great abilities, and perfect knowledge of his constitution, made him more capable of serving him than any other physician. Galen however, having desired him to leave him at Rome, the emperor, who was all goodness, complacency, and humanity, complied. I admire this condescension; but cannot conceive, how a physician in such a conjuncture could refuse himself to the desires of a prince so worthy of consideration. Perhaps the design he had formed of writing upon physic, and which he might have already begun to put in execution, might occasion this refusal. And indeed it was after this expedition of M. Aurelius till his death, and during the reign of Commodus his son and successor, that Galen composed and published his writings upon physic, either during his abode at Rome, or after his retirement into his own country. Part of his writings were lost in the conflagration, which destroyed whole quarters of Rome and many libraries in the reign of the emperor Commodus. The place and time of Galen's death are not exactly known.

A fact, which Galen relates of himself, shows

us both his vast ability, and the esteem which M. Aurelius had for him. "That prince," says he, "having been suddenly seized in the night with a colic and looseness, which made him feverish, his physicians ordered him to lie still, and gave him only a little broth in the space of nine hours. The same physicians returning afterwards to the emperor, where I happened to be, judged from his pulse, that he had a fever coming on him: for my part I continued silent, and even without feeling his pulse in my turn. This induced the emperor to ask me, turning towards the side where I was, why I did not come to him? To which I answered, that his physicians having already felt his pulse twice, I came into what they had done, not doubting but that they were better judges of his pulse than I. The prince however offering me his arm, I then felt his pulse, and having examined it with attention, I declared that there was not the least sign of the access of a fever, but that his stomach was clogged with some indigested food which occasioned his being feverish. M. Aurelius was so well convinced of what I said, that he cried out: 'That's it; you have hit it exactly: I feel my stomach clogged;' and repeated the same two or three times over. He afterwards asked me, what was to be done to relieve him? I replied, if any other person except the emperor were in the same condition, I should give him a little pepper in wine, as I have often done upon the like occasion. But, as it is the custom to give no remedies to princes, but what are very gentle, it will suffice to apply some wool steeped in oil of spike very hot, to the emperor's stomach. M. Aurelius," continues Galen, "did not fail to take both those remedies, and addressing himself afterwards to Pitholaus, his son's governor: 'We have but one physician,' said he, speaking of me. 'He's the only man of value we have.'"

The manners of that illustrious physician suited his ability and reputation. He expresses great respect for the Divinity in many places; and says, "That piety does not consist in offering incense or sacrifices to him; but in knowing and admiring the wisdom, power, and goodness, that shine forth in all his works one's self, and in making others know and admire them." He had the misfortune of not knowing, and even of condemning the true religion.

He never mentions his father, or his masters, but with the warmest and most respectful gratitude, especially when he speaks of Hippocrates, to whom he ascribes the whole honour of all he knew or practised. If he departs sometimes from his opinion, for he respected truth above all things, it is with such precautions and reservations, as argue the sincere esteem he had for

him, and how much he considered himself below him in every thing whatsoever.

His assiduity about the sick, the time which he bestowed upon knowing their condition exactly, the care which he took of the poor, and the relief he procured them, are fine models for the imitation of persons of the same profession.

We read in Pliny,¹ that *ARCHAGATHUS* of *Poloponnesus* was the first physician, who came to Rome: this was in the consulship of *L. Æmilius* and *L. Julius*, the 585th year from the foundation of the city, A. M. 3780, Ant. J. C. 215. It would be surprising if the Romans were so long without physicians. *Dionysius Halicarnassensis*,² speaking of a plague, which swept off almost all the slaves and half the citizens in the 801st year of Rome, says, that there were not physicians enough for the number of the sick. There were physicians then at that time. But it is probable, that the Romans, till the arrival of *Archagathus*, used only the natural, or the simple empiric kind of physic, such as we may suppose it practised by the first men. That physician was treated very honourably at first, and rewarded with the freedom of the city: but the violent remedies which he was obliged to use, for his principal excellency consisted in surgery, soon disgusted the people both of him and of physic in general. It seems, however, that many physicians came from Greece to Rome to practise their art, though *Cato*, during his life, opposed it with his whole power. For, in the decree, by which, many years after the death of that celebrated censor, the Greeks were obliged to quit Rome, the physicians are mentioned expressly. Till Pliny's time, of all professions, that of physic, as gainful as it was, was the only one no Roman had followed, because they believed it below them; and, if any did practise it, it was, to use the expression, only in going over to the Grecian camp, and speaking their language: for such was the folly and madness of the Romans, and even of the lowest of the people, that they would confide only in strangers, as if their health and lives had been most safe in the hands of those, whose very language they did not understand.³

It is difficult, and indeed foreign to my subject, to determine in respect to the merit of the ancient and modern physic, and to give the one the preference to the other. They have each their peculiar advantages, which render both

highly estimable. It is natural to conceive, that the experience of many ages must have added considerable lights to the knowledge of the ancients. I desired a learned physician,⁴ one of my brethren in the College Royal and the Academy of Belles Lettres, and my particular friend, to favour me with a few lines upon what I might say with reason upon a subject absolutely unknown to me. I shall content myself with inserting them here, without any addition. "The new discoveries, which have enriched the physic of the moderns, and which may give it the preference to that of the ancients, are: 1. Those of anatomy, which have made it more perfectly acquainted with the structure of the human body, and the wonders of the animal economy; amongst others, the circulation of the blood, with all its relations and dependencies: which has given it a great insight into the causes of diseases, and the manner of treating them. 2. Those of surgery, which, besides many very salutary operations added to those of the ancients, have rendered the modern practice more safe and expeditious, and less painful. 3. Those of pharmacy, which consists in the knowledge and use of many specific remedies for the cure of certain diseases; as *Quinquina* for the ague, *Ipecacuanha* for the dysentery, &c. without reckoning those which chemistry has rendered more efficacious and less disgusting. 4. The opening of bodies that have died of diseases, an abundant source of the most important observations, for improving the practice of physic in the treatment of the same diseases.

"The physic of the ancients is perhaps to be preferred to that of the moderns, in being less profuse of medicines in sickness, and less desirous to precipitate cures; in observing the motions of nature with more attention, and assisting them with greater confidence; and in being contented to divide the honour of the cure with nature, without arrogating the whole glory of it to itself," &c.

Physic, however useful and salutary, has had the misfortune to be the butt, almost in all times, even of great and highly estimable persons, especially among the Romans. *Cato*, to whose authority a triumph and the censorship add nothing, so much was his personal merit superior to all titles, was one of those who declared himself most strongly against the physicians, as we see in a letter to his son, preserved by Pliny.⁵ But we must observe, that he means in it only the physicians from Greece, to which nation he has abundance of ill-will. "You may depend

¹ Plin. l. xxv. c. l. ² Antiq. Rom. l. x. p. 677.

³ Solam hanc artium Græcarum nondum exercet Romana gravitas in tanto fructu: paucissimi Quiritium attingere, et ipsi statim ad Græcos transfuge. Imò verò auctoritas aliter, quàm Græcæ eam tractantibus, etiam apud imperitos expertesque lingue, non est: ac minis credunt, quæ ad salutem suam pertinent, si intelligunt. Plin. l. xxix. p. 1.

⁴ M. Boreta.

⁵ Quod clarissimè intelligi potest ex M. Catone, cujus auctoritati Triumphus atque Censura minimum conferunt: tanto plus in ipso est. Plin. l. xxix. c. l.

upon what I am going to say as a certain prediction. If ever that nation (meaning Greece) should impart to us their taste for letters, we are undone; and especially if they send us their physicians. They have sworn amongst themselves to destroy all the Barbarians with their art."⁶ The Greeks called all other nations by that name. So excessive an exaggeration refutes itself, and sufficiently explains what we ought to think of it.

Pliny the naturalist was much in the same way of thinking. He seems to have made it his business to decry the physicians, by throwing together all that could make them contemptible and even odious. He taxes them with avarice, upon account of the considerable rewards they received from princes: but ought the generous gratitude of the latter to be imputed to physicians? He reports the depravity of manners into which some of them fell: but were not these faults personal, and ought they not to be atoned for by the infinite services which others of the same profession have done mankind in all ages? He takes pains to turn the consultations of physicians into ridicule: he repeats an ancient inscription upon a tomb, in which the deceased said, that he died of a multitude of physicians: *TURBA SE MEDICORUM PERIISSE*. He complains that of all the arts physic is allowed to be practised without undergoing any examination, or giving any proofs of its ability. "They learn it," says he, "at our hazard, and acquire experience at the price of our lives. No law punishes their ignorance; nor is there any example of its being chastised. Only a physician can murder with absolute impunity."⁷ Pliny has reason for these complaints; but they extend only to empirics, that is to say, persons of no repute, authority, or learning, who take upon them to practise an art which of all others stands most in need of these qualifications.

Extremes are not to be admitted upon this head, in which blind confidence, and ill-grounded contempt, may be equally dangerous. The holy scripture, which is the rule of our opinions, prescribes both to the patient and physician how they ought to think and act. "Honour the physician with the honour due unto him, for the uses which you may have of him: for the Lord hath created him—The Lord hath created medicines out of the earth, and he that is

wise will not abhor them—Was not the water made sweet with wood, that the virtue thereof [of plants] might be known? And he hath given men skill, that he might be honoured in his marvellous works—My son, in thy sickness be not negligent; but pray unto the Lord, and he will make thee whole: Then give place unto the physician; for the Lord hath created him: let him not go from thee, for thou hast need of him. There is a time when in their hands there is good success; for they shall also pray unto the Lord, that he would prosper that which they give, for ease and remedy to prolong life."⁸ Only the Spirit of God is capable of giving such wise and reasonable advice.

SECT. II.

OF BOTANY.

Botany is a science which treats of plants. This branch of knowledge has been esteemed in all ages and nations. Mankind are generally enough convinced, that all physic is included in simples: and there is great reason to believe, that it had its beginning in these remedies, which are simple, natural, of no expense, always at hand, and within the reach of the poorest person.⁹ Pliny cannot bear that instead of using them, people should go at a great expense to the most remote countries in quest of medicines. Accordingly we see, that the most ancient physicians distinguished themselves by the knowledge and use of simples: *Æsculapius*, who, if we may believe fable, restored *Hippolytus* to life by the use of them;¹⁰ *Chiron*, the master of *Achilles*, so skilful in physic; *Jaspis*, to whom his father *Apollo*, the god of physic, granted as a rare gift, the knowledge of simples.

Scire potestates herbarum, usumque medendi.

Æn. l. xii. v. 361.

To know the powers of herbs, and arts of cure.

Botany is one of the parts of natural philosophy: it calls in the aid of chemistry; and is of great use in physic. Natural philosophy, or the physics in general, considers the internal structure of plants, their vegetation, generation, and multiplication. Chemistry reduces them to their principles or elements. Physic derives from these elemental principles, and still more frequently from the experience of the effects of

⁶ *Nequissimum et indocile genus illorum. Et hoc puta Vatem dixisse: Quandocumque ista gens suas literas dabit, omnia corrumpet. Tum etiam magis, si medicos suos huc mittet. Jurarunt inter se barbaros necare omnes medicina. Plin. l. xxix. c. 1.*

⁷ *Nulla lex que puniat incitiam: capitale nullum exemplum vindictæ. Discunt periculis nostris, et experimenta per mortes agunt: medicoque tantum hominem occidisse impunita summa est. Plin. ibid.*

⁸ *Ecclesiast. xxix. 1—14.*

⁹ *Hinc nata Medicina. Hac sola naturæ placuerat esse remedia, parata vulgo, inventu facilia, ac sine impendio—Ulcero parvo medicina à Rubro mari impetatur, cum remedia vera quotidie pauperissimus quisque cœnet. Plin. l. xxiv. c. 21.*

¹⁰ *Pæonias revocatum herbis. Virg.*

plants, when employed in substance, the use to be made of them for the health of a human body. The union of these several branches of knowledge in the same person forms an excellent character, but is not necessary to Botany properly so called, whose bounds are less extensive, within which it may confine itself with honour. To make plants a peculiar study, to know their most essential marks, to be able to name them in a short and easy method, that reduces them to their proper and respective kinds and classes, to describe them in terms so as to be known to those who never saw them; these are precisely the functions of a botanist considered as such.

In the earlier times, the knowledge of plants seems to have been purely medicinal: which is what rendered the catalogue of them so short and so limited, that Theophrastus, the best historian of antiquity come down to us upon this subject, names only six hundred, though he had collected not only those of Greece, but of Libya, Egypt, Ethiopia, and Arabia. Dioscorides and Pliny, though they might have had better and ampler memoirs upon this head, have scarce cited more. But, far from having established any order among them, they have not described those of which they speak, in a proper manner to distinguish and make them known; and have many, even of the most important in their collection, that are not now to be found.

The ages which succeeded that of Dioscorides, added little riches to botany. And, indeed, at length all the sciences were eclipsed, and did not appear again till the fifteenth century, when every body was intent upon hearing the ancients, in order to retrieve the learning which had been so long buried in oblivion. Pope Nicholas V. commissioned Theodore Gaza to translate Theophrastus, as the only man capable of making him understood. Soon after other learned men laboured successively in translating Dioscorides. These versions, though very estimable in other respects, served only to excite disputes between many very learned physicians.

The search after plants in the books of the Greeks and Latins was from that time conceived not the best method of making any great progress in the knowledge of them. Accordingly resolutions were taken to go in quest of it to the places where the ancients had wrote. With this view voyages were made to the islands of the Archipelago, Syria, Mesopotamia, Palestine, Arabia, and Egypt. These excursions were useless enough with respect to their principal design, the understanding of the ancient authors: but the learned having brought back a great number of plants which they discovered themselves; botany began to appear in its true form, and to change what before was only citation and comment, into natural observations and a regular science. About the end

of the fifteenth century, they confined themselves solely to describing the plants of their own countries, or of those into which greater curiosity had carried the lovers of botany; and they began to point out the places, where each plant grew, the time of its coming up, its duration, and maturity, with figures, that constitute the principal value of these kind of works, from the clearness they give them. Various collections which appeared at that time, instead of the five or six hundred extracted by Mathiolum from the ancients, included in the beginning of the sixteenth century more than six thousand all described, with their figures. There was still wanting, however, a general order, or system, to the knowledge of plants, which might make it a science properly so called, by giving it principles and a method. Upon this several of the learned employed themselves afterwards, with a success, not indeed perfect hitherto, (for sciences attain their ultimate perfection only from succession of time,) but which afforded great views and insight for arriving at that perfection.

The system of botany at length received its last form from Monsieur Tournefort.¹ His institutions, attended with the description and designs of an immense number of plants, will be an eternal monument of the vastness of his views, and his laborious inquiries, which cost him incredible fatigues, indispensably necessary to the design he proposed. For botany, says Mr. Fontenelle in his oration in praise of Mr. Tournefort, is not a sedentary and inactive science, that may be attained in the repose and shade of a closet, like geometry or history; or which at most, like chemistry, anatomy, and astronomy, requires operations of no great pains and application. To succeed in it, the student must range over mountains and forests, must climb steep rocks, and expose himself upon the brinks of precipices. The only books that can instruct him fully in this subject, are sprinkled over the face of the whole earth, and to peruse and collect them, he must resolve upon fatigue and danger.

To succeed in the design of carrying botany to the greatest perfection, or at least to approach it, it would be necessary to study Theophrastus and Dioscorides in Greece, Asia, Egypt, Africa, and in all the places where they lived, or with which they were more particularly acquainted. Monsieur Tournefort received the king's orders

¹ This was written (as may be at once supposed) before the appearance of Linnæus, whose system of classification superseded all others, and who established a new and by far the most important era in the history of botany. As the science belongs, comparatively speaking, to modern times, it does not fall within the design of this work to trace its progress.—Ed.

in 1700, to make the tour of these provinces, not only in order for knowing the plants of the ancients, and perhaps also such others as might have escaped them, but for making observations upon natural history in general. These are expenses worthy of a prince of Louis XIVth's magnificence, and will do him infinite honour throughout all ages. The plague which then raged in Egypt, abridged Mr. Tournefort's travels to his great regret, and made him return from Smyrna into France in 1702. He arrived, as a great poet says upon a more pompous but less useful occasion, "laden with the spoils of the East."² Besides an infinity of various observations, he brought back thirteen hundred and fifty-six new species of plants, without including those which he had collected in his former travels. What vast riches! It was necessary to dispose them in an order that might facilitate the knowledge of them. This Mr. Tournefort had before laboured in his first work, published in the year 1694. By the new order which he established, the whole were reduced into fourteen figures of flowers, by the means of which we descend to six hundred and seventy-three kinds, or distinct genuses, that contain under them eight thousand eight hundred and forty-six species of plants.

Since Monsieur Tournefort's death, botany has been greatly augmented, and new additions are every day made to it by the pains and application of those who have the care of this part of physic in the royal garden of France, especially since the direction of it has been given to the Count de Maurepas, secretary of state, who not only delights, but thinks it his duty, to protect learning and learned men.

I ought here to express my gratitude to Monsieur Jussieu, senior,³ who communicated one of his memoirs upon botany to me.

SECT. III.

OF CHEMISTRY.

Chemistry is an art which teaches to separate by fire the different substances contained in mixed bodies, or, which is the same thing, in vegetables, minerals, and animals; that is to say, to make the analysis of natural bodies, to reduce them into their first principles, and to discover their hidden virtues. It may be of use both to physicians in particular for the discovery of medicines, and natural philosophers in general for the knowledge of nature. It does not appear,

that the ancients made much use of it, though perhaps it was not unknown to them.

Paracelsus, who lived in the beginning of the sixteenth century, and taught physic at Basil, acquired great reputation there, by curing many persons of diseases believed incurable with chemical remedies. He boasted, that he could preserve a man's life during many ages, and died himself at fourscore and eight.

Mr. Lemery, so expert and famous in chemistry, declared almost all analyses to be no more than the curiosity of philosophers, and believed that in respect to physic, chemistry, in reducing mixed bodies to their principles, reduced them often to nothing. I shall relate one of his experiments, which is curious, and intelligible to every body.⁴

He made an *Ætna* or *Vesuvius*, by burying at the depth of a foot in the ground, during the summer, fifty pounds of filings of iron and sulphur pulverized in equal quantities, the whole made into a paste with water. In about eight or nine hours' time, the earth swelled, and opened itself in several places; and emitted hot and sulphurous vapours, and at length flames. It is easy to conceive, that a greater quantity of this mixture of iron and sulphur with a proportionate depth of earth, was all that was wanting to form a real mount *Ætna*: that the sulphurous vapours would, in endeavouring a passage, have occasioned an earthquake more or less violent, according to their force and the obstacles in their way: that when they either found or made themselves a vent, they would break out with an impetuosity to occasion a hurricane: that if they made their way through a part of the earth under the sea, they would occasion those water-spouts, so dangerous to ships: and, lastly, that if they rose to the clouds, they would carry their sulphur thither along with them, which would produce thunder.

There is a kind of chimerical chemistry, that proposes the transmutation of metals as its object, and is called *Alchymy*, or *Seeking the philosopher's stone*.

SECT. IV.

OF ANATOMY.

Anatomy is a science that teaches the knowledge of the parts of a human body, and of other animals, by dissection. Those who have wrote upon anatomy among the ancients, are Hippocrates, Democritus, Aristotle, Erasistratus, Galen, Herophylus,⁵ and many others,

² *Spoilia Orientis onustus. Virg.*

³ Doctor-regent in the faculty of physic in the university of Paris, professor and demonstrator of plants in the garden royal, &c.

⁴ Mem. de l'acad. des sciences, an. 1700.

⁵ According to Tertullian, this Herophylus, in order to know the human body, dissected a very great number of bodies.

who perfectly knew the necessity of it, and considered it as the most important part of physic; without which it was impossible to know the use of the parts of a human body, and consequently the causes of diseases. It was, however, entirely renounced for many ages, and was not re-instituted till the sixteenth century. The dissection of a human body was held sacrilege till the reign of Francis I. and there is a consultation extant, which the emperor Charles V. caused the professors of theology at Salamanca to hold, in order to inquire whether a human body might be dissected for the knowledge of its structure with a safe conscience. Vesal, a Flemish physician, who died in 1564, was the first who revived and methodized what is called anatomy.

Since him, anatomy has made a great progress,

and been much improved. One of the discoveries which have done most honour to the moderns, is the circulation of the blood. The motion by which the blood is carried several times a day from the heart into all the parts of the body by the arteries, and returns from those parts to the heart by the veins, is so called. In 1628, HARVEY, a celebrated English doctor, is said to have been the first who discovered this circulation, which is now admitted by all physicians. There are some, however, who deny him this glory, and even pretend that Hippocrates, Aristotle, and Plato, knew it before him. That may be: but they made so little use of it, that it is almost the same as if they had been ignorant of it; and as much may be said of them in respect to many other physical matters.

OF THE MATHEMATICS.

THE Mathematics hold the first place among the sciences, because they alone are founded upon infallible demonstrations. And this undoubtedly gave them their name. For *Mathesis* in Greek signifies science.

I shall consider particularly in this place only Geometry and Astronomy, which are the principal branches of mathematical knowledge; to which I shall add some other parts, that have an essential relation to them.

I must confess, to my shame, that the subjects of which I am going to treat are absolutely unknown to me, except the historical part of them. But, by the privilege I have assumed, with which the public does not seem to be offended, it is in my power to apply the riches of others to my own use. What treasures have I not found upon this occasion in the Memoirs of the Academy of Sciences! If I could have taken all I have said upon such sublime and abstracted subjects from them, I should have no occasion to fear for myself.

CHAPTER I. OF GEOMETRY.

The word *Geometry* signifies literally, *the art of measuring the earth*. The Egyptians are said to have invented it on account of the inundations of the Nile.¹ For that river carrying away the landmarks every year, and lessening some estates to enlarge others, the Egyptians were obliged to measure their country often, and for that purpose to contrive a method and art, which was the origin and beginning of geometry. This reason might have induced the Egyptians to cultivate geometry with the more care and attention; but its origin is undoubtedly of more ancient date. However that may be, it passed from Egypt into Greece, and Thales of Miletus is believed to have carried it thither at his return

from his travels. Pythagoras also placed it in great honour, and admitted no disciples who had not learned the principles of geometry.

Geometry is to be considered in two different views; either as a speculative, or a practical science.

Geometry, as a speculative science, considers the figure and extent of bodies according to three different dimensions, length, breadth, and thickness, which form three species of extent, lines, superficies, and solids, or solid body. Accordingly it compares the different lines with each other, and determines their equality or inequality. It shows also how much greater the one is than the other. It does the same in respect to superficies. For instance, it demonstrates that a triangle is the half of a parallelogram of the same base and height: that two circles are in proportion to each other as the squares of their diameters; that is to say, that if the one be three times as large as the other, the first will contain nine times as much space as the latter. And lastly, it considers solids or the quantities of bodies in the same manner. It shows, that a pyramid is the third of a prism of the same base and height: that a sphere or globe is two-thirds of a cylinder circumscribed, that is to say, a cylinder of the same height and breadth: that globes are in the same proportion with each other as the cubes of their diameters. If, for example, the diameter of one globe be four times as large as that of another, the first globe is sixty-four times as much in quantity as the second. Accordingly, if they are of the same matter, the former will weigh sixty-four times as much as the other, because 64 is the cube of 4.

Practical geometry, founded upon the theory of the speculative, is solely employed in measuring the three species of extent, lines, superficies, and solids. It teaches us, for example, how to measure the distance of two objects from each other, the height of a tower, and the extent of land: how to divide a superficies into as many parts as we please, of which the one may be twice, thrice, four times, &c. as large as another. It shows us how to gage casks, and the manner

¹ Herod. l. ii. c. 102. Strab. l. xvii. p. 787.

of finding the contents of any other vessels used either to hold liquids or solids. It not only measures different objects upon the surface of the earth, but the globe of the earth itself, by determining the extent of its circumference, and the length of its diameter. It goes so far as to show the distance of the moon from the earth. It even ventures to measure that of the sun, and its magnitude in respect to the terrestrial globe.

The most illustrious philosophers made this science their peculiar study: Anaxagoras, Plato, Aristotle, Architas, Eudoxus, and many others, of whom I shall only speak of the most known, and those whose works have come down to us.

EUCLID, Ant. J. C. 300. We shall speak of him in the sequel.

ARISTÆUS the elder. He seems to have been Euclid's cotemporary. He wrote five books upon *solid places*, that is to say, as Pappus explains it, upon the three Conic Sections.

APOLLONIUS PERGÆUS, so called from a city of Pamphylia, Ant. J. C. 250. He lived in the reign of Ptolemy Evergetes, and collected all that the most learned geometricians had written upon conic sections before him, of which he made eight books, which came down entire to the time of Pappus of Alexandria, who composed a kind of introduction to that work. The four last books of Apollonius were afterwards lost. But in 1658 the famous John Alphonso Borelli, passing through Florence, found an Arabian manuscript in the library of the Medici, with this inscription in Latin, *Apollonii Pergæi Conicorum Libri Octo*. They were translated into Latin.

ARCHIMEDES. I shall defer speaking of him for a little.

PAPPUS of Alexandria flourished in the reign of Theodosius, in the 395th year of Christ. He composed a collection upon geometrical subjects in eight books, of which the two first are lost. The Abbé Gallois, when the Academy of Sciences assumed a new form in 1699, undertook to work upon the geometry of the ancients, and particularly upon Pappus's collection, of which he was for printing the Greek text, that had never been done, and for correcting the very defective Latin version. It is a misfortune for the commonwealth of letters, that this was only intended.

Of the geometricians I have mentioned, the two most illustrious, and who have done most honour to geometry, but in a different degree of merit, were Euclid and Archimedes. Euclid is only an author of elements: but Archimedes is a sublime geometrician, whom even the most learned in the new methods, admire to this day.

EUCLID.

Euclid the mathematician was of Alexandria, where he taught in the reign of Ptolemy the son of Lagus. We must not confound him, as Valerius Maximus has done, with another Euclid of Megara, the founder of the sect of philosophers, called the Megaric sect, who lived in the time of Socrates and Plato, above fourscore years before the mathematician. Euclid seems to have made speculative geometry his sole and principal study. He has left us a work entitled, *The Elements of Geometry*, in fifteen books. It is however doubted, whether the two last are his. His elements contain a series of propositions, which are the basis and foundation of all the other parts of the mathematics. This book is considered as one of the most precious monuments which have come down to us from the ancients in respect to natural knowledge. He wrote also upon optics, catoptrics, music, and other learned subjects.

It hath been observed, that the famous M. Pascal, at twelve years of age, without having ever read any book of geometry, or knowing any thing more of that science, except that it taught the method of making exact figures, and of finding their proportions to each other, proceeded by the strength of his genius only, to the 32d proposition of the first book of Euclid.

ARCHIMEDES.

All the world knows that Archimedes was of Syracuse, and a near relation to king Hiero. What I have said of him with sufficient extent in speaking of the siege of Syracuse by the Romans, dispenses with my repeating his history in this place. He was, of himself and by natural inclination, solely intent upon whatever is most noble, most exalted, and most abstracted in geometry; and some of his works of this kind, of which he composed a great number, have come down to us. It was only at the request and warm instances of king Hiero his relation, that he suffered himself at length to be persuaded to bring down his art, from soaring perpetually after intellectual and spiritual things, sometimes to things sensible and corporeal, and to render his reasonings in some sort more evident and palpable to the generality of mankind, in mingling them by experiments with things of use. We have seen what services he did his country at the siege of Syracuse, and the astonishing machines that came from his industrious hands. He however set no value upon these, and con-

sidered them as pastime and amusement, in comparison with those sublime reasonings, that gratified his inclination and taste for truth in a quite different manner. The world is never more indebted to these great geometers, than when they descend to act thus for its service: it is a sacrifice, which costs them much, because it tears them from a pleasure of which they are infinitely fond, but to which they think themselves obliged, as indeed they are for the honour of geometry, to prefer the good of the public.

Eudoxus and Architas were the first inventors of this kind of mechanics, and reduced them to practice, to vary and unbend geometry by this kind of amusement, and to prove by sensible and instrumental experiments some problems, which did not appear susceptible of demonstration by reasoning and practice: which are Plutarch's own words.¹ He cites here the problem of the two mean proportionals for obtaining the duplication of the cube, which could never be geometrically resolved before Descartes did it. Plutarch adds, that Plato was much offended at them on this account, and reproached them with having corrupted the excellency of geometry, in making it descend, like a mean slave, from intellectual and spiritual, to sensible things, and in obliging it to employ matter, which requires the work of the hands, and is the object of a low and servile trade: and that from thenceforth mechanics were separated from geometry, as unworthy of it. This delicacy is singular; and would have deprived human society of a great number of aids, and geometry of the only part of it, that can recommend it to mankind: because if it were not applied to things sensible and of use, it would serve only for the amusement of a very small number of contemplative persons.

The two celebrated geometers, whom I have distinguished from the multitude, Euclid and Archimedes, universally esteemed by the learned though in a different degree, show how far the ancients carried their knowledge in geometry. But it must be confessed, that it soared to a quite different height, and almost entirely changed its aspect in the last age, by the new system of the Infinitesimal Analysis, or Differential Calculus, for which, no doubt, the particular application bestowed till then upon this study, and the happy discoveries made in it, had prepared the way. The advances we make in science are progressive. Every acquisition of knowledge does not reveal itself, till after the discovery of a certain number of things necessarily previous to it: and when it comes to its turn to disclose itself, it casts a light that attracts all eyes upon it. The period was arrived, wherein geometry was to bring forth the cal-

culus of Infinites. Newton was the first who made this wonderful discovery: and Leibnitz the first who published it. All the great geometers entered with ardour the paths that had been lately opened for them, in which they advanced with giant steps. In proportion as their boldness in treating infinites increased, geometry extended her bounds. The infinite exalted every thing to a sublimity, and at the same time led on to a facility in every thing, of which nobody had ventured so much as to conceive any hopes before. And this is the period of an almost total revolution in geometry.

I have said that Newton first discovered this wonderful calculus, and that Leibnitz published it first. The latter, in 1684, actually inserted the rules of the differential calculus in the *Acts of Leipsic*, but concealed the demonstrations of them. The illustrious brothers, the Bernoullis, discovered them though very difficult, and used this calculus with surprising success. The most exalted, the boldest, and most unexpected solutions rose up under their hands. In 1687 appeared Newton's admirable work, upon the *Mathematical Principles of Natural Philosophy*, which was almost entirely founded upon this calculus; and he had the modesty not to exclaim against the rules of Mr. Leibnitz. It was generally believed that each of them had discovered this new system, through the conformity of their great talents and learning. A dispute arose on this occasion, which was carried on by their adherents on both sides with sufficient warmth. Newton cannot be denied the glory of having been the inventor of this new system; but Mr. Leibnitz ought not to be branded with the infamous name of a plagiarist, nor to have the shame of a theft laid upon him, which he denied with a boldness and impudence very remote from the character of so great a man.

In the first years the geometry of the infinitesimal calculus was only a kind of mystery. Solutions frequently came out in the *Journals*, of which the method that produced them was not suffered to appear; and even when it was discovered, only some feeble rays of that science escaped, which were soon lost again in clouds and darkness. The public, or more properly, the small number of those who aspired at elevated geometry, were struck with a useless admiration, that made them never the wiser; and means were found to acquire their applause, without imparting the instruction, with which it ought to have been deserved. Mr. De l'Hôpital, that sublime genius, who has done geometry and France so much honour, resolved to communicate the hidden treasures of the new geometry without reserve, and he did so in the famous book called *the Analysis of Infinites*, which he published in 1696. He there unveiled

¹ Diog. Laert. in Archim. Plut. in Marcel. p. 305.

all the secrets of the geometrical infinite, and of the infinite of infinite; in a word, all the different orders of infinities, which rise upon one another, and form the boldest and most amazing superstructure, that human genius has ever ventured to imagine. It is in this manner the sciences attain their perfection.

As, in speaking of geometry, I travel in a country entirely unknown to me, I have scarcely done any thing, besides copying and abridging what I found upon the subject in the Memoirs of the Academy of Sciences. But I thought it incumbent on me to add the advantageous testimony, which Mr. De l'Hopital, of whom I have just spoken, gives in a few lines to Mr. Leibnitz, on account of the invention of the calculus of infinities, in his preface to the Analysis of Infinities. "His calculus," says he, "has carried him into regions hitherto unknown; where he has made discoveries that astonish the most profound mathematicians of Europe."

I add here another passage from the preface, but longer, that seems to me a model of the wise and moderate manner, with which one ought to think and speak of the great men of antiquity, even when we prefer the moderns to them. "What the ancients have left us upon these subjects, and especially Archimedes, is certainly worthy of admiration. But, besides their having touched very little upon curves, and that too very superficially, almost all they have done upon that head, are particular and detached propositions, that do not imply any regular and coherent method. They cannot however be justly reproached on that account. It required exceeding force of genius to penetrate through so many obscurities, and to enter first into regions so entirely unknown. If they were not far from them, if they went by round-about ways, at least they did not go astray; and the more difficult and thorny the paths they followed were, the more they are to be admired for not losing themselves in them. In a word, it does not seem possible for the ancients to have done more in their time. They have done what our best moderns would have done in their places; and if they were in ours, it is to be believed they would have had the same views with us.—It is therefore no wonder that the ancients went no farther. But one cannot be sufficiently surprised, that great men, and no doubt as great men as the ancients, should continue there so long; and through an almost superstitious admiration for their works, content themselves with reading and commenting upon them, without allowing themselves any farther use of their own talents, than what sufficed for following them, and without daring to venture the crime of thinking sometimes for themselves, and of extending their views beyond what the ancients had discovered.

In this manner many studied, wrote, and multiplied books: whilst no advancements at all were made. All the labours of many ages had no other tendency than to fill the world with obsequious comments, and repeated translations of originals, often contemptible enough. Such was the state of the mathematica, and especially of philosophy, till the period of Monsieur Descartes."

I return now to my subject. We are sometimes tempted to think the time very indifferently employed, that persons of genius bestow upon abstract studies, which seem of no immediate utility, and only proper to satisfy a vain curiosity. To think in this manner is contrary to reason; because we make ourselves judges of what we neither know, nor are qualified to know. It is indeed true, that all the speculations of pure geometry or algebra are not immediately applied to useful things, but they either lead or relate to those that do. Besides a geometrical speculation, which has at first no useful object, comes in time to be applicable to use. When the greatest geometricians of the seventeenth century studied a new curve, which they called the *cycloid*, it was only a mere speculation, in which they solely engaged through the vanity of discovering difficult theorems, in emulation of each other. They did not so much as pretend that they were labouring for the good of the public. The cycloid however was found, upon a strict inquiry into its nature, to be destined to give pendulums all possible perfection, and the measure of time its utmost exactness. Besides the aid which every branch of the mathematica derives from geometry, the study of this science is of infinite advantage in the uses of life. It is always good to think and reason right: and it has been justly said, that there is no better practical logic than geometry. Though the knowledge of numbers and lines absolutely tended to nothing, it would always be the only certain knowledge, of which we are capable by the light of nature, and would serve as the surest means to give our reason the first habitude and bent of truth. It would teach us to operate upon truths, to trace the chain of them, subtle and almost imperceptible as it frequently is, and to follow them to the utmost extent of which they are capable: in fine, it would render the true so familiar to us, that we should be able, on many occasions, to know it at the first glance, and almost by instinct.

The geometrical spirit is not so much confined to geometry, as that it cannot be taken off from it, and transferred to other branches of knowledge. Works of moral philosophy, politics, criticism, and even eloquence, *ceteris paribus*, would have additional beauties, if composed by geometricians. The order, perspicuity, distinct-

tion, and exactness, which have prevailed in good books for some time past, may very probably have derived themselves from this geometrical spirit, which spreads more than ever, and in some sort communicates itself from author to author, even to those who know nothing of geometry. A great man is sometimes followed by the age in which he lives; and the person, to whom the glory of having established a new art of reasoning may justly be ascribed, was an excellent geometrician.¹

OF ARITHMETIC AND ALGEBRA.

Arithmetic is a part of the mathematics. It is a science which teaches all the various operations of numbers, and demonstrates their properties. It is necessary in many operations of geometry, and therefore ought to precede it. The Greeks are said to have received it from the Phœnicians.

The ancients, who have treated arithmetic with most exactness, are Euclid, Nicomachus, Diophantus of Alexandria, and Theon of Smyrna.

It was difficult either for the Greeks or the Romans to succeed much in arithmetic, as both used only the letters of the alphabet for numbers, the multiplication of which, in great calculations, necessarily occasioned abundance of trouble. The Arabic ciphers now used, which have not above four hundred years of antiquity, are infinitely more commodious, and have contributed very much to the improvement of arithmetic.

Algebra is a part of the mathematics, which upon quantity in general expressed by the letters of the alphabet does all the operations done by arithmetic upon numbers. The characters it uses signifying nothing of themselves, may be applied to any species of quantity, which is one of the principal advantages of this science. Besides these characters, it uses certain signs, that greatly abridge its operations, and render them much clearer. By the help of algebra most of the problems of the mathematics may be resolved, provided they are capable of solution. It was not entirely unknown to the ancients. Plato is believed to be the inventor of it. Theon, in his treatise upon arithmetic, gives it the name of *analysis*.

All great mathematicians are well versed in algebra, or at least sufficiently for indispensable use. But this knowledge when carried beyond this ordinary use, is so perplexed, so thick sown with difficulties, so clogged with immense calculations, and in a word, so hideous, that few people have heroic courage enough to plunge into such dark and profound abysses. Certain

shining theories, in which refinement of genius seems to have more share than severity of labour, are much more alluring. However, the more sublime geometry is become inseparable from algebra. Mr. Rolle, among the French, has carried this knowledge as high as possible, for which he had a natural inclination and a kind of instinct, that made him devour all the asperity, and I had almost said, horror of this study, not only with patience but delight.

I shall not enter into a circumstantial account of arithmetic and algebra, which far exceeds my capacity, and would neither be useful nor agreeable to the reader.

It has been, for some years, an established custom in the university of Paris, to explain the elements of these sciences in the classes of philosophy, by way of introduction to physics. This last part of philosophy, in its present state, is almost a system of enigmas to those, who have not at least some tincture of the principles of the mathematics. Accordingly the most learned professors have conceived it necessary to begin with them, in order to make any progress in physics. Besides the advantages, which result from the mathematics in respect to physics, those who teach them in their classes, find that the youth, who apply themselves to them, acquire an exactness of mind, and a close way of thinking, which they retain in all the other sciences. These two considerations suffice to show our obligation to the professors, who first introduced this custom, which is now become almost general in the university.

Mr. Rivard, professor of philosophy in the college of Beauvais, has composed a treatise upon this subject, which contains the elements of arithmetic, algebra, and geometry, wherein every thing is said to be explained to a sufficient extent, and with all possible exactness and perspicuity.

OF MECHANICS.

Mechanics is a science, that teaches the nature of the moving powers, the art of designing all kinds of machines, and of removing any weight by the means of levers, wedges, pulleys, wheels, &c. Many, who consider mechanics only with regard to their practice, set little value upon it, because it seems to belong solely to workmen, and to require the hands only, and not the understanding: but a different judgment is passed upon it, when considered with regard to their theory, which is capable of employing the most exalted genius. It is besides the science that guides the hands of the workman, and by which he brings his inventions to perfection. A slight idea, dropped even by the ignorant, and the effect of chance, is afterwards often pursued by degrees to supreme perfection, by persons pro-

¹ Descartes.

Soundly skilled in geometry and mechanics. This happened in respect to telescopes, which owe their birth to the son of a Dutchman who made spectacles. Holding a convex glass in one hand, and a concave one in the other, and looking through them without design, he perceived that distant objects appeared much larger, and more distinct than when he saw them with the naked eye. Galileo, Kepler, and Descartes, by the rules of dioptrics, carried this invention, gross as it was in its beginning, a great way; which has since been much more improved.

The most celebrated authors of antiquity, who have wrote upon the mechanics, are Architas of Tarentum; Aristotle; Æneas his cotemporary, whose tactics are still extant, in which he treats of machines of war, a work which Cineas, the friend of Pyrrhus, abridged; Archimedes particularly, of whom we have spoken before; Athenæus, who dedicated his book upon machines, to Marcellus, that took Syracuse; and lastly, Hero of Alexandria, by whom we have several treatises.

Of all the works upon mechanics which have come down to us from the ancients, only those of Archimedes treat this science in all its extent; but often with great obscurity. The siege of Syracuse shows, how high his abilities in mechanics rose. It is no wonder, that the moderns, after the many physical discoveries made in the last century, have carried that science much farther than the ancients. The machines of Archimedes, however, still amaze the most profound in the mechanics of our times.

If all the advantages of mechanics were to be particularly shown, it would be necessary to describe all the machines used heretofore on different times and occasions, both in war and peace, as well as those now used either for necessity or diversion. It is upon the principles of this science, that the construction of wind and water-mills for different uses is founded; of most of the machines used in war, both in the attack and defence of places; of those which are employed in great numbers for the raising of heavy weights in building, and of water by pumps, wheels, and all the various engines for that use; in a word, we are indebted to mechanics for an infinity of very useful and curious works.

OF STATICS.

Statics is a science, that makes part of the mixed mathematics. It considers solid bodies in respect to their weight, and lays down rules for moving them, and for placing them in *equilibrium*.

The great principle of this science is, that when

the masses of two unequal bodies are in reciprocal proportion to their velocities, that is to say, when the quantity or mass of the one contains that of the other, as much as the swiftness of the second contains that of the first, their quantities of motion, or powers, are equal. From this principle it follows, that with a very small body a much greater may be moved: or, which is the same thing, that with a certain given power any weight whatsoever may be moved. For this purpose the velocity of the moving power is only to be augmented in proportion to the weight of the body to be moved.

This appears evidently in the lever, on which almost all machines depend. The point on which it is supported, is called the *fulcrum*, or point of support. The extent from that point to one of the extremities, is called the distance from the point of support, or *radius*. The bodies at the two extremities of the lever, are called weights. If one of these weights be only half the other, and its distance twice as far from the fulcrum, the two weights will be in *equilibrium*, because then the velocity of the least will contain that of the greatest, in the same manner as the mass of the greatest will contain that of the least: for their velocities are in the same proportion to each other, as their distances from the point of support. According to this principle, by augmenting the distance of the weight which is but half the other, the lighter will raise up the heavier.

It was upon this principle that Archimedes told king Hiero, that if he had a place, where he could fix himself and his instruments, he could move the earth. To prove what he said, and to show that prince, that the greatest weight might be moved with a small force, he made the experiment before him upon one of the largest of his galleys, which had double the lading it used to carry put on board; and which he made move forward upon the land without difficulty, by only moving with his hand the end of a machine he had prepared for that purpose.

Hydrostatics considers the effects of weight in liquids, whether in liquids alone, or in liquids acting upon solids, or reciprocally. It was by hydrostatics, that Archimedes discovered what a goldsmith had stolen from king Hiero's crown, in which he had mingled other metal with gold. His joy was so great on having found this secret, that he leaped out of the bath without considering he was naked, and solely intent upon his discovery, went home in that condition, to make the experiment, crying out through the streets, *I have found it, I have found it.*

CHAPTER II.

OF ASTRONOMY.

Mr. Cassini has left us an excellent treatise upon the origin and progress of astronomy, which I shall only abridge in this place.²

It is not to be doubted but astronomy was invented from the beginning of the world. As there is nothing more surprising than the regularity of those great luminous bodies, that turn incessantly round the earth, it is easy to judge, that one of the first objects of the curiosity of mankind was to consider their courses, and to observe the periods of them. But it was not curiosity alone that induced men to apply themselves to astronomical speculations: necessity itself may be said to have obliged them to it. For if the seasons are not observed, which are distinguished by the motion of the sun, it is impossible to succeed in agriculture. If the times proper for making voyages were not previously known, commerce could not be carried on. If the duration of the month and year was not determined, a certain order could not be established in civil affairs, nor the days allotted to the exercise of religion be fixed. Thus as neither agriculture, commerce, polity, nor religion could dispense with astronomy, it is evident that mankind were obliged to apply themselves to that science from the beginning of the world.

What Ptolemy³ relates of the observations of the heavens, by which Hipparchus reformed astronomy almost two thousand years ago, proves sufficiently, that in the most ancient times, and even before the flood, this science was much studied. And it is no wonder, that several of the astronomical observations, made during the first ages of the world, should be preserved even after the flood, if what Josephus⁴ relates be true, that the descendants of Seth, to preserve the remembrance of the celestial observations which they had made, engraved the principal of them upon two pillars, the one of brick and the other of stone; that the pillar of brick withstood the waters of the deluge, and that even in his time there were remains of it to be seen in Syria.

It is agreed that astronomy was cultivated in a particular manner by the Chaldeans. The height of the tower of Babel, which the vanity of men erected about a hundred and fifty years after the flood, the level and extensive plains of that country, the nights in which they breathed the fresh air after the troublesome heat of the

day, an unbroken horizon, a pure and serene sky, all conspired to engage that people to contemplate the vast extent of the heavens, and the motions of the stars.⁵ From Chaldaea astronomy passed into Egypt, and soon after was carried into Phœnicia, where they began to apply its speculative observations to the uses of navigation, by which the Phœnicians soon became masters of the sea and of commerce.

What made them bold in undertaking long voyages, was their custom of steering their ships by the observation of one of the stars of the Little Bear, which being near the immoveable point of the heavens, called the pole, is the most proper to serve as a guide in navigation. Other nations, less skilful in astronomy, observed only the Great Bear in their voyages.⁶ But as that constellation is too far from the pole to be capable of serving as a certain guide in long voyages, they did not dare to stand out so far to sea, as to lose sight of the coast: and if a storm happened to drive them into the main ocean, or upon some unknown shore, it was impossible for them to know by the heavens into what part of the world the tempest had carried them.

Thales having at length brought the science of the stars from Phœnicia into Greece, taught the Greeks to know the constellation of the little Bear, and to make use of it as their guide in navigation.⁷ He also taught them the theory of the motion of the sun and moon, by which he accounted for the length and shortness of the days; determined the number of the days of the solar year, and not only explained the cause of eclipses, but showed the art of foretelling them, which he even reduced to practice, foretelling an eclipse which happened soon after. The merit of a knowledge so uncommon in those days made him pass for the oracle of his times, and occasioned his being given the first place among the seven sages of Greece.

Anaximander was his disciple, to whom Pliny⁸ and Diogenes Laërtius ascribe the invention of the sphere, that is to say, the representation of the terrestrial globe; or, according to Strabo,⁹ geographical maps. Anaximander is said also to have erected a gnomon at Sparta, by means of which he observed the equinoxes and solstices; and to have determined the obliquity of the ecliptic more exactly than had ever been done before; which was necessary for dividing the terrestrial globe into five zones, and

⁵ Principio Assyrii, propter planitiem magnitudinemque regionum quas incolebant, cum cœlum ex omni parte patens atque apertum intuerentur, trajectiones motusque stellarum observaverunt—Qua in natione Chaldaei diuturna observatione siderum scientiam putantur effecisse, &c. *Cic. de Divin.* l. i. n. 2.

⁶ Arat. ⁷ Diog. Laert. l. i.

⁸ Plin. l. vii. c. 56.

⁹ Strab. l. i. p. 7. *Diog. Laert.* l. ii.

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² *Memoires de l'Academ. des Sciences*, vol. viii.

³ Ptolem. *Almagest.* l. iv. c. 2.

⁴ Joseph. *Antiq.* l. i.

for distinguishing the climates, that were afterwards used by geographers for showing the situation of all the places of the earth.

Upon the instructions which the Greeks had received from Thales and Anaximander, they ventured into the main sea, and sailing to various remote countries, planted many colonies in them.

Astronomy was soon repaid for the advantages she had procured navigation. For commerce having opened the rest of the world to the learned of Greece, they acquired great light from their conferences with the priests of Egypt, who made the science of the stars their peculiar profession. They learned also many things from the philosophers of the sect of Pythagoras in Italy, who had made so great a progress in this science, that they ventured to reject the received opinions of all the world concerning the order of nature, and ascribed perpetual rest to the sun, and motion to the earth.¹

Meton distinguished himself very much at Athens by his particular application to astronomy, and by the great success with which his labours were rewarded.² He lived in the time of the Peloponnesian war; and when the Athenians were fitting out a fleet against Sicily, foreseeing that expedition would be attended with fatal consequences, he counterfeited the madman, to avoid having a share in it, and setting out with the other citizens. It was he that invented what is called *The Golden Number*, in order to make the lunar and solar years agree.³ That number is a revolution of nineteen years, at the end of which the moon returns to the same place and days, and renew its course with the sun, at the difference of about an hour and some minutes.

The Greeks improved also from their intercourse with the Druids,⁴ who, among many other things, says Julius Cæsar, which they taught their youth, instructed them particularly in the motion of the stars, and the magnitude of the heavens and the earth, that is to say, in astronomy and geography.

This kind of learning is more ancient among the Gauls, than is generally imagined. Strabo⁵ has preserved a famous observation, made by Pytheas at Marseilles above two thousand years ago, concerning the proportion of the shadow of the sun to the length of a gnomon at the time of the solstice. If the circumstances of this observation were exactly known, it would serve to resolve an important question, which is, whether

the obliquity of the ecliptic be subject to any change.

Pytheas was not contented with making observations in his own country.⁶ His passion for astronomy and geography made him run over all Europe, from the pillars of Hercules to the mouths of the Tanais. He went by the western ocean very far towards the Arctic pole, and observed that in proportion as he advanced the days grew longer at the summer solstice, so that in a certain climate there was but three hours of night, and farther only two, till at last in the Island of Thule, the sun rose almost as soon as it set, the tropic continuing entirely above the horizon of that isle; which happens in Iceland, and the northern parts of Norway, as modern accounts inform us. Strabo who imagined that these climates were uninhabitable, accuses Pytheas of falsehood, and blames the credulity of Eratosthenes and Hipparchus, who, upon Pytheas's authority, said the same thing of the Island of Thule. But the accounts of modern travellers having fully justified Pytheas, we may give him the glory of being the first, who advanced towards the pole to countries before believed uninhabitable, and who distinguished climates by the different lengths of days and nights.

About Pytheas's time, the learned of Greece having conceived a taste for astronomy, many great men among them applied themselves to it in emulation of each other. Eudoxus, after having been some time the disciple of Plato, was not satisfied with what was taught upon that subject in the schools of Athens. He therefore went to Egypt to cultivate that science at its source, and having obtained a letter of recommendation from Agesilaus king of Sparta to Nectanebus king of Egypt, he remained sixteen months with the astronomers of that country, in order to improve himself by consulting them. At his return, he composed several books upon astronomy, and among others the description of the constellations, which Aratus turned into verse some time after by the order of Antigonus.

Aristotle, the cotemporary of Eudoxus, and also Plato's disciple, made use of astronomy for improving physics and geography. By the observations of astronomers, he determined the figure and magnitude of the earth.⁷ He demonstrated that it was spherical by the roundness of its shadow, which appeared upon the disk of the moon in eclipses, and by the inequality of the meridian altitudes which are different according to their distance from, or approach to the pole. Callisthenes, who was in the train of Alexander the Great, having had occasion to go to Babylon, found astronomical observations there, which

1 Arist. de cæl. l. ii. c. 13.

2 Plut. in. Alcib. p. 169. In. Nic. p. 532.

3 Diod. Sicul. l. xii. p. 94.

4 Multa præterea de sideribus atque eorum motu, de mundi ac terrarum magnitudine, de rerum natura disputant, et juventuti transdunt. Cæs. de Bel. Gall. l. 6.

5 Strab. l. ii. p. 115.

6 Strab. l. ii. p. 115.

7 Arist. de Cæl. l. ii. c. 14.

the Babylonians had made during the space of nineteen hundred and three years, and sent them to Aristotle.

After Alexander's death, the princes who succeeded him in the kingdom of Egypt, took so much care to attract the most famous astronomers to their courts by their liberality, that Alexandria, the capital of their kingdom, soon became, to use the expression, the seat of astronomy. The famous Conon made many observations there, but they have not come down to us. Aristyllus and Timochares observed the declination of the fixed stars there, the knowledge of which is absolutely necessary to geography and navigation. Eratosthenes made observations upon the sun in the same city, which served him for measuring the circumference of the earth.⁸ Hipparchus, who resided also at Alexandria,⁹ was the first who laid the foundation for a system of astronomy, when upon the appearance of a new fixed star, he took the number of the fixed stars, in order that future ages might know, whether any more new ones appeared. The fixed stars amounted then to a thousand and twenty-two. He not only described their motion round the poles of the ecliptic, but applied himself also to regulate the theory of the motions of the sun and moon.¹⁰

The Romans, who aspired to the empire of the world, took care at different times to cause descriptions of the principal parts of the earth to be made, a work which implied some knowledge of the stars. Scipio Africanus the younger, during the war with Carthage, gave Polyblus ships, in order to survey the coasts of Africa, Spain, and the Gauls.

Pompey corresponded with the learned astronomer and excellent geographer, Posidonius,¹¹ who undertook to measure the circumference of the earth by celestial observations, made at different places under the same meridian,¹² in order to reduce into degrees, the distances, which the Romans till then had measured only by *stadia* (or furlongs) and miles.

In order to settle the difference of climates, the difference of the lengths of shadows was observed, principally at the time of the solstices and equinoxes. Gnomons and obelisks had been set up for this purpose in several parts of the world, as Pliny and Vitruvius inform us,¹³ who have transmitted many of those observations down to posterity. The greatest obelisks were those of Egypt. Julius and Augustus Cæsar caused some of them to be brought thence to Rome, as well to serve for ornaments of the city

as to give the exact measures of the proportion of shadows. Augustus caused one of the greatest of these obelisks to be placed in the field of Mars, which was a hundred and eleven feet high, without the pedestal.¹⁴ He caused foundations to be made to it as deep as the obelisk was high; and when the obelisk was placed upon them, he ordered a meridian line to be drawn at bottom, of which the divisions were made with plates of brass fixed in stone, to show the lengthening or shortening of the shadows every day at noon, according to the difference of the seasons. And to show this difference with greater exactness, he caused a ball to be placed upon the point of that obelisk, which is still in the field of Mars at Rome, lying in the ground across the cellars of houses built upon its ruins. By comparing the shadows of this obelisk with those observed in several other parts of the world, the knowledge of the latitudes so necessary to the perfection of geography was attained.

Augustus in the meantime caused particular descriptions of different countries to be made, and principally that of Italy, where the distances were marked by miles along the coasts, and upon the great roads.¹⁵ And at length, in that prince's reign, the general description of the world,¹⁶ at which the Romans had laboured for the space of two ages, was finished from the memoirs of Agrippa, and set up in the midst of Rome, in a great portico built for that purpose. The Itinerary, ascribed to the emperor Antoninus, may be taken for an abridgment of this great work. For this Itinerary is in effect only a collection of the distances which had been measured throughout the whole extent of the Roman empire.

In the reign of that wise emperor, astronomy began to assume a new appearance. For Ptolemy, who may be called the restorer of this science, improving from the knowledge of his predecessors in it, and adding the observations of Hipparchus, Timocharis, and the Babylonians to his own, composed a complete body of astronomy in an excellent book entitled, *The great Construction*, which contains the theory and tables of the motion of the sun, moon, and other planets, and of the fixed stars. Geography is no less indebted to him than astronomy, as we shall see in the sequel.

As great works are never perfect in their beginnings, we must not be surprised, that there are many things to amend in Ptolemy's geography. Many ages elapsed before any body undertook it. But the Arabian princes, who conquered the countries where astronomy and geography were particularly cultivated and professed, had no sooner declared it their intention

8 Ptol. Almag. l. vii. 9 Cleomed. l. i.
10 Ptol. Almag. l. iii.—vii. 11 Plin. l. vii. c. 30.
12 Cleomed. l. i.
13 Plin. l. ii. c. 72, 73. Vitruv. l. ix. c. 4.

14 Plin. l. xxxvi. c. 10. 15 Plin. l. lii. c. 3.
16 Ibid. c. 2.

to make the utmost improvements in those sciences, than persons capable of contributing to the execution of their design were immediately found. Almamon, caliph of Babylon, having at that time caused Ptolemy's book entitled *the great Construction*, which the Arabians called *Almagest*, to be translated out of Greek into Arabic, many observations were made by his orders; by means of which the declination of the sun was discovered to be less by one third of a degree than that laid down by Ptolemy; and that the motion of the fixed stars was not so slow as he believed it to be. By the order of the same prince, a great extent of country under the same meridian was measured, in order to determine the length of a degree of the earth's circumference.

Thus astronomy and geography were gradually improved. But the art of navigation made a much more considerable progress in a short time by the help of the compass, of which I shall speak in the sequel.

Almost at the same time that the compass began to be used, the example of the caliphs excited the princes of Europe to promote the improvement of astronomy. The emperor Frederic II. not being able to suffer that the Christians should have less knowledge of this science than the barbarians, caused the *Almagest* of Ptolemy to be translated into Latin from the Arabic, from which version Johannes de Sacrobosco, professor in the university of Paris, extracted his work concerning the sphere, upon which the most learned mathematicians of Europe have written commentaries.

In Spain, Alphonso king of Castile was at a truly royal expense in assembling learned astronomers from all parts.¹ By his orders they applied themselves to the reformation of astronomy, and composed new Tables, which from his name were called the Alphonsine Tables. They did not succeed at first in establishing the hypothesis of the motion of the fixed stars, which they supposed too slow: but Alphonso afterwards corrected their Tables, which have since been augmented, and reduced into a more commodious form by different astronomers.

This work awakened the curiosity of the learned of Europe, who immediately invented several kinds of instruments for facilitating the observations of the stars. They calculated Ephemerides, and made tables for finding the declination of the planets at all times, which with the observation of the meridian altitudes, shows the latitudes at land and sea. They laboured also to facilitate the calculation of eclipses, by the observation of which longitudes are found. The fruit of these astronomical

labours was the discovery of many countries unknown before. I shall speak of them elsewhere.

France has also produced many illustrious men, who excelled in astronomy, because it has had great princes from time to time, who have taken care to excite their subjects by rewards to apply to it. Charles V., surnamed the wise, caused many mathematical books to be translated into French. He founded two professorships of mathematics in the college of M. Gervais at Paris, to facilitate the study of those sciences to his subjects. They flourished principally in the following century through the institution of two professorships in the royal college by Francis I. for teaching the mathematics in the capital city of his kingdom. This school produced a considerable number of learned men, who enriched the public with many astronomical and mathematical works, and formed illustrious disciples, whose reputation almost obscured that of their masters.

Germany and the northern nations also produced many excellent astronomers, among whom Copernicus distinguished himself in a particular manner. But the famous Tycho Brahe much exceeded all the astronomers that had preceded him. Besides the Theory and the Tables of the sun and moon, and many fine observations which he made, he composed a new Catalogue of the fixed stars with so much exactness, that the author might from that work alone deserve the name, which some have given him, of Restorer of astronomy.

Whilst Tycho Brahe was making observations in Denmark, several famous astronomers, who assembled at Rome under the authority of pope Gregory XIII., laboured with success, in correcting the errors which had insensibly crept into the ancient calendar, through the precession of the equinoxes, and the anticipation of the new moons. These errors would in process of time have entirely subverted the order established by the councils for the celebration of the moveable feasts, if the calendar had not been reformed according to the modern observations of the motions of the sun and moon compared with the ancient.

In the last and present age, an infinity of new discoveries have been made, which have rendered astronomy incomparably more perfect than it was when it first began to be taught in Europe. The celebrated Galileo, by the good use he made of the invention of telescopes, was the first who discovered things in the heavens, which had long passed for incredible. Descartes may be ranked among the improvers of astronomy: for the book he composed upon the principles of philosophy, shows that he had taken no less pains to know the motions of the stars, than the other parts of physics: but he confined himself more to reasoning than obser-

¹ Calvis, ad an. 1259.

vation. Gassendi applied himself more to practical astronomy, and published a number of very important observations.

The establishment of the Royal Academy of Sciences may justly be considered as the means that has contributed most to the credit and improvement of astronomy in France, by the incredible emulation, which the desire of supporting their reputation, and distinguishing themselves, excites in a body of learned men. Louis XIV. having caused the Observatory to be built, of which the design, magnificence, and solidity are equally admirable, the Academy, to answer his majesty's intention, in erecting that superb edifice, applied themselves with incredible industry to whatever might contribute to the improvement of astronomy. I shall not particularize in this place the important discoveries that have been the fruits of this institution, the learned works of this society, nor the great men who have done, and still continue to do it so much honour. Their names and abilities are known to all Europe, which does their merit all the justice it deserves.

REFLECTIONS UPON ASTRONOMY.

I cannot conclude the article of astronomy without making two reflections with the authors of the learned Memoirs of the Academy of Sciences.

FIRST REFLECTION.

Upon the Satellites of Jupiter.

We are naturally enough inclined, as I have already observed in speaking of geometry, to consider as useless, and to despise what we do not understand. We have one moon to light us by night; and what signifies it to us, says somebody, that Jupiter has four? (the moons or satellites of Jupiter are the same thing) And wherefore so many laborious observations, and fatiguing calculations, for knowing their revolutions? We shall be never the wiser for them, and nature, which has placed those little stars out of the reach of our eyes, does not seem to have made them for us. In consequence of so plausible a way of reasoning, observing them with the telescope, and studying them with particular attention, ought to be neglected. And what a loss would not that have been to the public!

The method of determining the longitudes of the places of the earth by the means of the eclipses of Jupiter's satellites, which the Royal Academy first began to put in practice, was found so exact, that it was judged that the correction of geography in general, and the making of true maps and charts for the use of navigation, might be undertaken by this means. This could

not be done before, because the eclipses of the moon had been the only means used for finding, but with little exactness, the difference of the longitudes of some remote places. And these eclipses that usually happen only once or twice a year, are much less frequent than those of the satellites of Jupiter, which happen at furthest every two days, though all of them cannot be observed in the same place, as well through the difference of the hours during which Jupiter is above the horizon, as upon account of the weather, which often prevents observations.

This undertaking to work for the improvement of geography in a new and more perfect manner than had ever been imagined before, being agreeable to his majesty's intentions in the institution of his Academy of Sciences, it was his pleasure, that persons should be chosen, capable of executing the instructions to be given them in different places, and that proper occasions should be taken for sending them into remote countries. The history of these voyages is exactly related in the Memoirs of the Academy of Sciences, and is, in my opinion, one of the circumstances of the reign of Louis XIV. which will do him most honour in ages to come. When his majesty was informed of the observations, that the members of the Academy of Sciences had taken by his order in different places out of the kingdom, he commanded them to apply themselves in making a map of France with the utmost exactness possible. This had been often attempted, but without success, for want of the means we have at this time, which are pendulum-clocks, and the great telescopes now used for discovering the eclipses of Jupiter's satellites, which is the most certain method for determining the difference of meridians. Had astronomy in all its extent no other advantage to mankind, than what is derived from the satellites of Jupiter, it would sufficiently justify those immense calculations, those assiduous and scrupulous observations, that great number of instruments constructed with so much care, and the superb building solely erected for the use of this science. The least knowledge of the principles of geography and navigation shows, that since Jupiter's four moons have been known, they have been of more use in respect to those sciences, than our moon itself; that they now serve, and always will, for making sea charts vastly more correct than those of the ancients, which in all probability will save the lives of a great number of mariners.

SECOND REFLECTION.

Upon the Amazing Scene which Astronomy opens to our View.

Though astronomy were not so absolutely necessary as it is to geography and navigation,

it would be highly worthy of the curiosity of all thinking men from the grand and superb scene which it opens to their view. To give some idea of it, I shall only repeat in few words, what the observations of astronomers have taught us of the immense volume of some of those great orbs, that move over our heads.

The stars are divided into planets and fixed stars.

The planets (a Greek word that signifies *errant* or *wandering*) are so called because they are not always at an equal distance either from each other, or from the fixed stars, whereas the latter are always at the same distance from each other. The planets have no light of their own, and are only visible by the reflection of that of the sun. Astronomers have observed, that they have a particular motion of their own, besides that which they have in common, with the rest of the heavens. They have computed this motion, and from the time which each planet employs in one revolution, have with reason established its elevation and distance.

The MOON of all the planets is the nearest to the earth, and almost sixty times less.

The SUN is not a body of the same species as the earth, and the rest of the planets, nor solid like them. It is a vast ocean of light, that boils up perpetually, and diffuses itself with incessant profusion. It is the source of all that light which the planets only reflect to each other after having received it from him.

The EARTH is a million of times less than the globe of the sun, and thirty-three millions of leagues distant from it. During so many ages the sun has suffered no diminution. Its diameter is equal at this day to the most ancient observations of it, and its light as vigorous and as abundant as ever.

JUPITER is five times as far from the sun as the earth is, that is to say, a hundred and sixty-five millions of leagues. He turns round upon his own axis every ten hours.

SATURN is thirty years in his revolution round the sun. He is twice as far from it as Jupiter, and consequently ten times more distant than the earth, that is to say, three hundred and thirty millions of leagues.

The FIXED STARS are, with respect to the earth, at a distance not to be conceived by human intellect. According to the observations of Mr. Huygens, the distance of the earth from the nearest fixed star, is with respect to that of the sun as one to twenty-seven thousand six hundred and sixty-four. Now we have said, that the distance of the earth from the sun is thirty-three millions of leagues. The least distance, therefore, of the earth from the fixed stars is nine hundred and two billions,¹ nine

hundred and twelve millions of leagues, that is to say, twenty-seven thousand six hundred and sixty-four times the distance from this to the sun, which, as we have said, is thirty-three millions of leagues. The same Mr. Huygens supposes, and infallible experiments have proved him right, that a cannon bullet flies about a hundred toises (above two hundred yards) in a second. Supposing it to move always with the same velocity, and measuring the space it flies according to that calculation, he demonstrates that a cannon bullet would be almost twenty-five years in arriving at the sun; and twenty-seven thousand six hundred and sixty-four times twenty-five years in reaching the fixed star nearest the earth. What then must we think of the fixed stars infinitely more remote from us?

The stars are innumerable. The astronomers of old counted a thousand and twenty-two of them. Since the use of astronomical glasses, millions that escape the eye appear. They all shine by their own light, and are all, like the sun, inexhaustible sources of light. And, indeed, if they received it from the sun, it must necessarily be very feeble after a passage of so enormous a length: they must also transmit it to us at the same distance, by a reflection, that would make it still much weaker. Now it would be impossible, that a light which had undergone a reflection, and ran twice the space of 902,912,000,000 leagues, should have the force and liveliness that the light of the fixed stars has. It is, therefore, certain, that they are luminous of themselves, and in a word, all of them so many suns.

But the question here is only the magnitude and remoteness of those vast bodies. When we consider them together, is it possible to support the view, or rather the idea of them? The globe of the sun a million of times greater than the earth, and distant thirty-three millions of leagues! Saturn, almost four thousand times as big, and ten times farther from the sun than the earth! No comparison between the planets and the fixed stars! The whole immense space which contains our sun and planets, is but a small part of the universe. As many of the like spaces as of fixed stars. What then must the immensity of the whole firmament be, that contains all these different bodies within its extent? Can we so much as think of it, can we fix our view upon it for some moments, without being confounded, amazed, and terrified? It is an abyss, in which we lose ourselves. What then must be the greatness, power, and immensity of him, who with a single word both formed these enormous masses, and the spaces that contain them! And these wonders incomprehensible to human understanding, the holy scripture, in a style that belongs only to God

¹ A billion is ten hundred thousand millions.

expresses in one word, "and the stars." After having related the creation of the sun and moon, it adds, "he made also the stars." Is there any thing requisite, to render the incredulity and ingratitude of mankind inexcusable, besides

this book of the firmament written in characters of light? And has not the prophet reason to exclaim, full of religious admiration: "The heavens declare the glory of God, and the firmament reveals the wonders of his power."

SUPPLEMENT BY THE EDITOR.

THE learned and eloquent author of this work having treated the history of mathematical and astronomical science in rather a superficial manner, according, indeed, to his own very modest and ingenious confession, it would seem to be only doing justice to the rest of his useful labours to supply this deficiency by a concise yet comprehensive sketch of that truly valuable portion of the knowledge of the ancients. In what follows, we shall not confine ourselves to the arrangement of the text, but endeavour to relate the discoveries of ancient times in the order of their occurrence, whether in pure or applied science; and, as their history is much interwoven, we shall thus more distinctly perceive the mutual light which they reflected upon each other, and be more easily enabled to collect into a focus the scattered rays of scientific renown which encircle the memory of those mighty geniuses who shine like the stars of the firmament amid the dark gloom of antiquity.

Astronomy appears to have been the first of the sciences which was either cultivated or brought to any degree of perfection. Coeval with agriculture, it was necessary to the proper distribution of the husbandman's operations, and to the accurate recognition of those periods and seasons which directed them, and without which his labour might have been in vain. We are led to this conclusion, even from the first chapter of Holy Writ, in which the sacred historian announces to us the work of the fourth day of creation, and the important use which the inhabitants of this lower world were to derive from it: "And God said, Let there be lights in the firmament of the heaven, to divide the day from the night, and let them be for signs, and for seasons, and for days, and for years." To this origin, no doubt, is to be ascribed the early observance of the seasons, by means of astronomical observations, which, though not dignified by the name of science, were sufficient to enable man in the first stages of society to conduct his operations, whether in the cultivation of the ground, or in the daily business of life, with that degree of sagacity with which the great Creator had endowed the race. Philosophers, indeed, who deny the authority of the sacred historian to whom we have referred, are sorely puzzled to account for the rise and progress of human knowledge, and especially of science, from their unwillingness to

admit the interference of the Supreme in the affairs of men, and their desire to exclude him from that careful providence and superintendence which are so manifest in all the natural and moral revolutions of the world, and which constitute the Christian's chief happiness and safeguard, enabling him to say of God alone, what the great Roman poet once blasphemously applied to a mere human creature like himself:

O! et presidium, et dulce decus meum.

It is curious to see how infidel astronomers differ even among themselves with respect to the origin of their favourite science, and how many absurd and unfounded theories they advance on the authority of a few rude observations which have escaped the ravages of time. While Laplace supposes the existence of an ancient Astronomy, which determined in a certain way, the rising and setting of the stars,—the motion of the sun in an orbit inclined to the equator,—the motion of the moon and the cause of her phases and eclipses,—the knowledge of the planets and their revolutions,—the sphericity of the earth and its measure,—he finds himself at a loss to fix its era and extent, from the deficiency of monuments of its existence; yet he would still refer it to a very high antiquity, from the astronomical periods which have reached us, although he says that they suppose a series of observations as long, as the observations themselves are imperfect. This mode of estimating the antiquity of observations from their imperfection, was no doubt considered by him as perfectly philosophical! Accordingly, it must be inferred, that that nation which can boast of the most imperfect observations, can also boast of the greatest antiquity! How different from such vagaries is the simple narrative of Scripture! It does not pretend to give us an account of the first astronomical theories and observations of men, but it gives us a true account of the origin of the world, which no fine-spun and plausible theory has yet been able to impugn, and it informs us of the true use to which the observance of the motions of the heavenly bodies was first applied. After the flood, before which nothing is known but what has been transmitted to us by the sacred historian, he informs us, that God announced, in his promise to Noah respecting the preservation of the

world from any similar catastrophe, that, "While the earth remaineth, seed-time and harvest, and cold and heat, and summer and winter, and day and night, shall not cease." These periods and seasons could only be determined with precision, by means of astronomical observations, rude and imperfect no doubt at first, in comparison to the delicate investigations of modern times, but sufficient for the purposes of agriculture, and for the foundation of that knowledge which was to be the boast and the delight of future ages.

Notwithstanding the supposition of Laplace on the one hand, that there existed an ancient Astronomy, and of course, a people of whom no traces are to be found, who invented and cultivated the Science,—and the arguments of Bailly supported by Playfair on the other, that the Indian astronomy remounts to a period at least 3102, if not 4900 years, before the Christian era,—it is quite evident, from the names which have been given from time immemorial to the twelve signs of the zodiac, that the first astronomical observations originated in the determination of the seasons proper for agriculture and the sports of the field. We agree, therefore, with Laplace in his observation, that the names of these signs were not imposed upon them by chance, though we differ from him as to the period of their antiquity. We cannot even coincide with him in opinion respecting the origin of these names, as it seems to be too fanciful for the foundation of a sober theory respecting the era of this primitive astronomy. According to this eminent astronomer, some of them have a reference to the annual motion of the sun; *Cancer* and *Capricorn* indicate its retrogradation at the solstices; and *Libra* points out the equality of the days and nights at the equinox; while the other names seem to relate to the agricultural pursuits and climate of the people with whom the zodiac originated. This is certainly sufficiently vague for the foundation of a theory, yet not more so than the observation that *Capricorn* appears better placed at the point of highest elevation in the sun's course, than at the lowest. Whence he concludes that in this position, which, according to his estimate of the precession of the equinoxes, remounts to a period of 15,000 years, *Libra* was then in the vernal equinox; and that the signs of the zodiac had then a striking relation to the climate of Egypt and to agriculture! Aware, however, of the untenableness of such a position, in the total absence of all historical information, nay, in the very face of the testimony of the Divine record, independently of the arguments that might be adduced against it, as to a possible change of climate and agricultural or other pursuits during the revolutions of so many ages, whether arising from physical or moral causes, Laplace starts another theory more plausible in point of chronology, as its origin only precedes the period of the flood by about 150 years, though it is equally unsupportable by a single fact. He affirms that the same relation between the zodiacal signs and the climate and agriculture of Egypt, would still subsist, if the constellations of the zodiac, instead of having been named from their rising with the sun, or at the commencement of the day, had received their appellations from their rising at the commencement of the night, on the supposition, that the rising of *Libra* at that moment had indicated the beginning of spring. Whence he concludes, that the origin of the zodiac, which

would then remount only to a period of 2,500 years before the Christian era, accords much better than the preceding theory with the state of our knowledge regarding the antiquity of the sciences, and especially of astronomy.

Abandoning theory, Laplace proceeds to take refuge in the boasted antiquity of the Chinese astronomy, and asserts that their annals present the most ancient observations that could be employed in that science. The following is his account of their pretensions, which it is not uninteresting to relate, as it may serve to show the progress of that singular people in this kind of knowledge, although we may be permitted to doubt its antiquity. The first eclipses of which they make mention, according to Laplace, proves that at the epoch of the emperor Yao, more than 2000 years before the Christian era, astronomy was cultivated in China, as the foundation of their ceremonies. The calendar and the prediction of eclipses were the important objects for which a mathematical tribunal was created. They observed from that period, the meridian shadows of the gnomon at the solstices, and the passage of the stars over the meridian; they measured time by clepsydres; and they determined the position of the moon with regard to the stars, during eclipses; which determined the sidereal positions of the sun and the solstices. They had even constructed instruments for measuring the angular distances of the heavenly bodies. By such means, the Chinese had found that the length of the solar year was about a fourth part of a day more than 365 days, which began with them at the winter solstice. Their civil year was lunar, and to reduce it to the solar year, they made use of the period of 19 solar years corresponding to 235 lunations, a period exactly the same as that which Calippus introduced into the Greek calendar more than sixteen centuries after that epoch. Their months consisted of 29 and 30 days alternately; their lunar year consisted, therefore, of 354 days, being shorter than the solar year by 11 days; but in the year when the amount of these annual differences exceeded a lunation, they intercalated a month. They had divided the equinoctial into 12 immoveable signs, and into 28 constellations, in which they determined with care the position of the solstices. The Chinese had a cycle of 60 years (by which they reckoned their historical and astronomical periods) instead of a century; and a cycle of 60 days instead of a week; but the small cycle of seven days, in use all over the east, was unknown to them from the remotest times. In China, the division of the circle always corresponded to the length of the year, in such a manner that the sun described exactly one degree per day; but the divisions of the degree, of the day, of their weights, and all their lineal measures, were decimal. The first observations useful to astronomy, were made by Tcheou-Kong, whose memory is still held in veneration in China for one of the best princes that ever bore kingly sway. He was the brother of Ou-Ouang, founder of the dynasty of Tcheou, and ruled the empire during the minority of his nephew, from the year 1104 to the year 1098 before the Christian era. Confucius, in Chou-King, the book most revered by the Chinese, makes this great prince address the sagest maxims of government and morality to his pupil Tcheou-Kong, and his astronomers made a great number of observations, of which three have happily reached us, and they are precious from their high antiquity. Two of

these are the meridian lengths of the gnomon, observed with great care, at the summer and winter solstices, in the city of Loyang; they give for the obliquity of the ecliptic, at that ancient epoch, a result conformable to the theory of universal gravitation. The other observation relates to the position of the winter solstice in the heavens, at the same epoch, and it, in like manner, agrees as much with the theory as the means then employed would admit in the determination of an element so delicate. This remarkable agreement, says Laplace, does not permit us to doubt of the authenticity of these observations. His authority is the Jesuit Gaubil, who published a history of the Chinese astronomy, and wrote an article on the same subject, in the 26th volume of *Lettres édifiantes*. Laplace states that he published in the *Connaissance des Temps* for 1809, a precious manuscript of the same Jesuit, on the solstices and the meridian shadows of the gnomon, observed in China. From these publications, it appears, that Tcheou-Kong observed the meridian shadows of a gnomon of eight Chinese feet, at the solstices in the city of Loyang, now called Honan-Fou. He traced a meridian with care, and he levelled the ground on which the shadow was projected. He found the length of the meridian shadow of the gnomon to be a foot and a half at the summer solstice, and three feet at the winter solstice. To deduce the obliquity of the ecliptic from these observations, many corrections must be applied. The most considerable is that of the sun's semidiameter; for it is evident that as the extremity of the shadow of the gnomon indicates the height of the sun's upper limb, we must subtract its apparent semidiameter from that height, to obtain that of its centre. It is surprising that all the ancient observers, even those of the Alexandrian school, had neglected a correction so essential and so simple; this neglect has been the cause of errors in their determination of the latitudes of places, nearly equal to this semidiameter. A second correction relates to astronomical refraction, which, for want of observation, may be supposed without sensible error, to correspond to the temperature of 50° Fahrenheit's thermometer, and to the height of 29.92 inches of the barometer. Lastly, a third correction depends on the parallax of the sun, which reduces these observations to the centre of the earth. By applying these three corrections to the preceding observations, we find the altitude of the sun's centre referred to that of the earth, equal to 79° 6'.8646 at the summer solstice; and to 31° 18'.7896 at the winter solstice. These altitudes give 34° 47'.1729 for the altitude of the pole at Loyang, a result which agrees very nearly with the mean of the observations of the Jesuit missionaries, on the latitude of that city; they give also 23° 54'.0402 for the obliquity of the ecliptic at the epoch of Tcheou-Kong, which may be fixed without sensible error, at the year 1100 before the Christian era. By remounting to that epoch, according to a formula given in the sixth book of the *Mécanique Céleste*, Laplace found that the obliquity of the ecliptic ought then to have been 23° 51'.8694; and he remarks that the difference of 2'.1708 will appear very small, if we consider the uncertainty which still exists respecting the masses of the planets, as well as that which the observations of the gnomon present, arising especially from the penumbra which renders the termination of its shadow ill-defined. Tcheou-Kong likewise

observed the position of the winter solstice relatively to the stars, and fixed it at 2 Chinese degrees from *Nu*, a Chinese constellation which begins with λ in *aquarius*. These 2 degrees, according to their division of the circle already mentioned, correspond to 1° 58'.2758 of our division. The stars at that epoch being referred to the equinoctial, the right ascension of the star was, according to that observation, 208° 1'.7184. It ought to be 208° 51'.231 in the year 1100 B. C. according to the formulæ of the *Mécanique Céleste*. To make the difference of 49'.5126 between these results disappear, we have only to remount to a period of 54 years beyond that epoch, which will appear inconsiderable, if we reflect on the uncertainty of the precise epoch of this great prince, and especially on that of the observations themselves. They were made on the instant of the solstice; but the greatest error to be feared, is in the manner of referring the solstice to the star λ of *Aquarius*, whether Tcheou-kong had made use of the difference in time between the passages of the sun and the star over the meridian, or had measured the distance of the moon from that star at the instant of a lunar eclipse, two methods employed by the Chinese astronomers.

Such is Laplace's account of the early Chinese astronomy, and of the observations on which its antiquity rests. There are several points, however, to which we can by no means yield our implicit assent. That the Chinese were acquainted with the use of instruments for measuring angular distances, and that they should still resort to the rude method of determining the obliquity of the ecliptic, or the latitude of the place, by the shadow of a gnomon, appears to us extremely inconsistent. Besides, their mode of dividing the circle seems to be so complicated and unnatural, if it depended on the sun's *variable* apparent daily motion in the ecliptic, that we cannot conceive how they could graduate an angular instrument with any degree of accuracy, and much less, how they could use it without error. That they should also have been unacquainted from the remotest times with the week or period of 7 days originally instituted by the Creator, seems to us a paradox, that will require more faith in the authority of the Jesuit missionaries or in the Chinese themselves, than we are disposed to yield. That they may have lost the knowledge of it, we are ready to grant, for being among those nations who "did not like to retain God in their knowledge," they might be given over to that ignorance which is the universal concomitant of a gloomy and debasing superstition. Independently of the rudeness of the method by which the Chinese observations appears to have been made, which is enough to render the coincidence with the results obtained by the formulæ in the *Mécanique Céleste*, merely accidental, the last especially being considerably wide of the truth, Laplace's own account of the people furnishes us with a strong argument in favour of a much later date. He states that the burning of the Chinese books, which took place at the command of the emperor Chi-Hoanti, about the year 213 B. C., destroyed the vestiges of the ancient methods for calculating eclipses, as well as of many interesting observations. This throws a strong doubt on those that remain, and in fact induces us to believe that the observations above narrated must either be referred to a much later epoch, or that they have been corrected by subsequent observations, on the

supposition that they are correctly reported. Laplace proceeds to observe that to obtain observations of any importance to astronomy, we must descend to about four centuries later than the epoch of Teheou-Kong, and transport ourselves into Chaldean. And, indeed, if there were any nation to whose observations we would feel more disposed to yield the palm of antiquity than to another, that nation is the Chaldeans. Ptolemy has transmitted to us many of their observations; the most ancient are three eclipses of the moon, which were observed at Babylon in the years 719 and 720 before the Christian era, and of which he made use in determining the motions of the moon. Doubtless, Hipparchus could obtain none more ancient, and at the same time sufficiently exact to be employed in such determinations, the accuracy of which is in proportion to the interval which separates the extreme observations. This consideration, says Laplace, ought to diminish our regret for the loss of the Chaldean observations, which Aristotle (if we may believe Porphyry cited by Simplicius) obtained by the intervention of Callisthenes, and which remounted to 19 centuries before the period of Alexander the Great, or to the age of Nimrod, according to Rollin. Though well-founded doubt is thrown upon this boasted antiquity of the astronomical observations of the Chaldeans, it is evident that they could only have discovered the *Saros*, or period of 6585 1-3d days, by a long series of observations; during which period the moon made 233 revolutions with respect to the sun, 239 anomalistic revolutions, and 241 revolutions with respect to its nodes. They added 4-135ths of the circumference, to obtain the sidereal motion of the sun during that interval, which supposes the sidereal year to consist of 365 1-4th days. Ptolemy, in speaking of this period, attributes it to the most ancient mathematicians; but the astronomer Geminus, who was contemporary with Sylla, speaks of the Chaldeans as the inventors of it, and he explains the manner in which they derived from it the diurnal motion of the moon, and the method by which they calculated her anomaly. His testimony, adds Laplace, ought to leave no room for doubt, if we consider that the Chaldean *Saros*, of 228 lunar months, which reduces the moon to the same position with respect to its nodes, its perigee and the sun, made part of the preceding period. This period and the ingenious manner in which they calculated the principal lunar inequality, must have required a great number of observations skilfully compared with each other, and it forms the most curious monument of astronomy before the foundation of the Alexandrian school. Such, indeed, is all that we know with certainty, respecting the astronomy of a people, who were considered in ancient times, the most learned in that science. The opinions of the Chaldeans with respect to the system of the world, were very various, which must always be the case, in those points which neither observation nor theory had yet fully explained. Nevertheless, some of their philosophers more fortunate than others, or guided by sounder views of the order and immensity of the universe, imagined that comets were like the planets subject to motions regulated by eternal laws.

Little is known with certainty respecting the astronomy of the Egyptians. The exact direction of the sides of their pyramids to the four cardinal points affords a favourable idea of their

mode of making observations; but none of their observations have reached us. It is surprising that the Alexandrian astronomers were forced to have recourse to the Chaldean observations; either the vestiges of the Egyptian observations must have been lost, or that people must have been unwilling to communicate them, from a feeling of jealousy originating in the favour of their sovereigns for the school which they had founded. Before that epoch, the reputation of their priests had attracted the most eminent philosophers of Greece. Thales, Pythagoras, Eudoxus, and Plato, went to derive that knowledge from them, with which they enriched their country; and it is probable that the school of Pythagoras was indebted to them, for some of those sound ideas which they held respecting the constitution of the universe. Macrobius expressly attributes to them, the idea of the motions of Mercury and Venus round the sun. Their civil year consisted of 365 days; it was divided into 12 months of 30 days each, and they added at the end five complementary days.

But according to the ingenious remark of M. Fourier, says Laplace, the observation of the heliacal risings of Sirius, the most brilliant of the stars, taught them that the return of these risings was then retarded by the fourth part of a day, every year; and they had founded on this observation, the sothic period of 1,461 years, which brought back their months and feasts very nearly to the same seasons. This period was revived in the year 189, A. D. Laplace proceeds as follows in his account of the claims of the Egyptians to ancient astronomy. If, says he, the sothic period was preceded by a similar one, as every thing would lead us to believe, the origin of this anterior period would remount to an epoch when we could suppose with probability, that the Egyptians had given names to the constellations of the zodiac, and had founded their astronomy. They had observed that in 25 of their years, there occurred 309 returns of the moon to the sun; which gives a near approximation to the length of the month. In short, we see by the remains of their zodiacs, that they carefully observed the positions of the solstices in the zodiacal constellations. According to Dion Cassius, the institution of the week is due to the Egyptians. This period is founded on the most ancient system of astronomy, which placed the sun, the moon, and the planets, in that order of their distances from the earth which begins with the greatest; Saturn, Jupiter, Mars, the Sun, Venus, Mercury, the Moon. The successive parts of the series of days, each being divided into 24 portions, were consecrated in the same order to these bodies. Every day took its name, from the body corresponding to its first part. The week with our names is found in India among the Bramins; and I am assured, says Laplace, that the days named by them and by us in the same manner, correspond to the same physical instants of time. This period, which was in use among the Arabs, the Jews, the Assyrians, and over all the East, was always revived without interruption or change, after the lapse of centuries, and the revolutions of empires. It is impossible among so many different people to discover its inventor; we can only affirm that it is the most ancient monument of astronomical knowledge. The civil year of the Egyptians being 365 days, it is easy to see that in giving to every year the name of its first day, the names of these years will be perpetually

those of the days of the week. To this origin is to be ascribed those weeks of years, which we see employed among the Hebrews, but which evidently belong to a people whose year was solar, and consisted of 365 days. Such is Laplace's account of the Egyptian astronomy; it is sufficiently meagre, and apparently ill-founded. The hints, however, thrown out with a view to invalidate the Hebrew records, are quite evident, and, fortunately, as harmless as they are contradictory. His denial, as we have seen, of the observance of the week among the Chinese, whose astronomical observations he would refer to the remotest times, while he admits that it was in use *over all the East*, is a curious instance of inconsistency and inaccuracy. It is strange that he did not recollect this exception, or if he did, that he has not thought proper to advert to it, or to state his reasons for the exclusion of the Chinese from a knowledge so universal. The assertion that it is impossible to discover the inventor of the week among so many different nations, and the confession, at the same time, that it is the *most ancient monument of astronomical knowledge*, are very remarkable counterparts of each other, and serve strikingly to show how a philosopher, though compelled to admit one fact, will sometimes endeavour to deny or get rid of another equally obvious, in order to accommodate the conclusion to his preconceived or prejudiced notions. The Hebrew records, bearing the stamp of divine authority, announce in the first chapter of the book of Genesis, not only the origin of the days of the week, but the work of creation due to each day, and consequently ascribe the invention of the period of 7 days to no other than the great Creator himself; yet here we have a philosopher, in the nineteenth century, an era remarkable for the progress of knowledge and the march of the human mind, declaring that the inventor of this period is unknown! Surely this man, perhaps the only individual who could be compared with our great Newton in science, since the time when that luminary disappeared, had never read that sublime book, whose testimony he seems thus to set at nought. If he ever did so, where could he have found a more simple, and at the same time, a more probable account, independent of its authenticity, than that which Moses gives of the origin of the week? Observe the admirable conclusion of the account, which the Jewish legislator gives, of the creation of the "heavens and the earth," and all their shining hosts:—"And on the *seventh day* God ended his work which he had made: and he *rested on the seventh day* from all his works which he had made. And God *blessed the seventh day* and *sanctified it*: because that in it he had rested from all his work, which God had created and made." Such is the true origin of the week, and the sacred institution of the Sabbath, which happily continues to our times, under a new and more glorious dispensation. Not all the sneers of infidels, or doubts of philosophers, shall ever be able to invalidate the truth of the Mosaic account of these divine institutions; and let them call in the aid of science as they will, so long as their remarks are founded on such weak foundations, as some random philosophical conjectures, a few rude and imperfect observations of ancient and unauthenticated date, the lying reports of Jesuit missionaries, the boasted pseudo-antiquity of some nations groaning under the iron hand of despotism, and sunk to the lowest degree of

superstition and ignorance, the advocates of pure science and pure religion have nothing to fear; nay, doubly armed with a panoply both human and divine, they can often turn the arguments of infidels against themselves with an effect like the recoil of a gun that goes off at last, after having been many times charged in vain. The attempt of Laplace to explain the nature of the weeks of years spoken of in the prophecies of Scripture, (which is what he means by their being employed among the Hebrews,) upon natural principles, is so much of a piece with the rest of his random conjectures that it is unnecessary to do more than just to point out its absurdity. For, whenever men who deny the divine authority of these writings endeavour to explain them upon what they call philosophical principles, they are as sure to show their own weakness, as a person unacquainted with any branch of science would do by talking on the same subject with those who were deeply learned.

Astronomical knowledge, according to Laplace, appears to have been the basis of all the ancient theogonies, whose origin is thus explained in the simplest manner. In Chaldea and in ancient Egypt, astronomy was only cultivated in temples, by priests who founded on it the superstitions of which they were the ministers. The fabulous history of heroes and gods which they presented to credulous ignorance, was only an allegory of celestial phenomena, and of the operations of nature. Taking advantage of the natural desire of mankind to penetrate into futurity, they created the false science of astrology for the sake of establishing and preserving their power. Man, induced by the illusions of his senses to regard himself as the centre of the universe, was easily persuaded that the heavenly bodies influenced his destiny, and that it was possible to foretell it by observing their aspect at the moment of his birth. This false science, dear to his self-love, and necessary to his restless curiosity, is nearly as ancient as astronomy; and it kept its ground even till the end of the seventeenth century, an era, when knowledge generally diffused the true system of the world over Europe, and destroyed the imposing fabric of astrology without the possibility of its being ever again revived. So true it is that the introduction of moral and physical error into the world was simultaneous, and that man amidst those gleams of philosophic truth which appeared like the flash of lightning in the storm, was still carried away by his unruly passions and his debased reason, into those absurd and unseemly reveries and follies which too often terminated in his own ruin.

The origin of astronomy in Persia and in India is lost, as it is in every nation, in the darkness which hangs over the first periods of their history. The Indian tables indicate an astronomy so far advanced; but every thing leads us to believe that they are not of very high antiquity. In this point, says Laplace, it is with pain that I differ in opinion with an illustrious and unfortunate friend, whose death, a continual subject of regret, is a dreadful proof of the inconstancy of popular favour. The Indian tables exhibit two principal epochs which respectively remount to the years 3102 before, and 1491 after the Christian era. These epochs are connected by the motions of the sun, moon, and planets, in such a manner that by commencing at the position which the Indian tables assign to all these bodies at the second

epoch, and remounting to the first by means of these tables, we find the general conjunction which they suppose at that primitive epoch. Before stating Laplace's objections to the antiquity of these tables, it may be proper to give some account of them, from Playfair's "Remarks on the Astronomy of the Brahmins," which are chiefly derived from Bailly's work on the Indian and Oriental Astronomy. The first notice of this astronomy was given by M. La Loubere in 1687, who brought to Europe a Siamese manuscript containing tables and rules for calculating the places of the sun and moon. Two other sets of tables were sent to Paris by the missionaries in Hindostan, which remained unnoticed till the return of M. Legentil from India, where he had been to observe the transit of Venus in 1769. A learned Brahmin of Tirvalore, having paid a visit to the French astronomer, instructed him in the methods which he used for calculating eclipses of the sun and moon, and communicated to him the tables and rules published in the *Memoirs of the Academy of Sciences* for 1772. The astronomy of India is confined to one branch of the science; it gives no theory, nor even any description of the celestial phenomena, but satisfies itself with the calculation of certain changes in the heavens, particularly of the eclipses of the sun and moon, and with the rules and tables by which these calculations are performed. The Brahmin, says Playfair, seating himself on the ground, and arranging his shells before him, repeats the enigmatical verses that are to guide his calculation, and from his little tablets of palm leaves, takes out the numbers that are to be employed in it. He obtains his results with wonderful certainty and expedition; but having little knowledge of the principles on which his rules are founded, and no anxiety to be better informed, he is perfectly satisfied, if, as it usually happens, the commencement and duration of the eclipse answer within a few minutes to his prediction. Beyond this his astronomical inquiries never extend; and his observations, when he makes any, go no farther than to determine the meridian line, or the length of the day, at the place where he observes. The Brahmins, like all other astronomers, have distinguished from the rest of the heavens, that portion, through which the sun, moon, and planets, continually move. They divide this space, which we call the zodiac, into 27 equal parts, each marked by a group of stars or constellation. This division of the zodiac is extremely natural in the infancy of astronomical science; because the moon completes her circle among the fixed stars nearly in 27 days; and, it must be remembered, that in those early periods, the moon was the only instrument, if we may be allowed the term, by which the positions of the stars were ascertained; and when her own irregularities were unknown, she was, by the rapidity of her motion eastward, well adapted for this purpose. With the constellations, that distinguish the 27 equal spaces, into which their zodiac is divided, the astronomers of India have connected none of those figures of animals, which are among us, of an ancient original. M. Legentil has given us their names and configurations. They are formed for the most part of small groups of stars, such as the Pleiades or the Hyades, those belonging to the same constellation being all connected by straight lines. The first, or that which is placed at the beginning of the zodiac,

consists of six stars, extending from the head of Aries to the foot of Andromeda, in our zodiac, and occupying a space of about 10° in longitude. These constellations do not include all the stars in the zodiac; those stars seem to have been selected which are best adapted for marking out, by lines drawn between them, the place of the moon in her progress through the heavens. While the stars in the zodiac, besides, are divided into 27 constellations, the ecliptic is divided, as with us, into 12 signs of 30° each. This division is purely ideal, and is intended merely for the purpose of calculation. The names and emblems by which these signs are expressed, are nearly the same as with us; here, however, we can no more agree with Playfair than we did with Laplace, when he says, "as there is nothing in the nature of things to have determined this coincidence, it must, like the arrangement of the days of the week, be the result of some ancient and unknown communication!" Laplace admits that something must have determined the coincidence, and so far we must agree with him; but when he begins to conjecture without data, we must differ as widely from him, as we do from Playfair, when he refers the arrangement of the days of the week, which he says is founded on the phases of the moon during the period of 27 days, to some ancient and unknown communication. That it is ancient, we admit, but that it is unknown we deny, since Moses, in the most ancient book in the world, informs us very distinctly of its origin, as we have already shown. That motion, by which the fixed stars all appear to move eastward, and continually to increase their distance from the place of the sun at the vernal equinox, is known to the Brahmins, and enters into the composition of all their tables. They compute this motion to be at the rate of $54''$ a year; so that their *annus magnus*, or the time in which the fixed stars complete an entire revolution, is 24,000 years. This motion is too rapid by somewhat less than $4''$ a year; an error that will not be thought great, when we consider that Ptolemy committed one of $14''$ in determining the same quantity. All the Indian tables have this peculiarity, that they express the longitude of the sun and moon by their distance from the beginning of the moveable zodiac, and not, as is usual with us, by their distance from the point of the vernal equinox. The longitude is reckoned in signs of 30° , each degree being divided into 60, and so on. Their division of time is purely sexagesimal; they divide the day into 60 hours, the hour into 60 minutes and so on; so that their hour is 24 of our minutes, their minute 24 of our seconds, and so on in succession. The epoch of the Siamese tables was found by Cassini, who ingeniously analyzed their rules, to correspond to the 21st of March, in the year 638, A. D. at 3 A. M. on the meridian of Siam. This was the instant at which the astronomical year began, and at which both the sun and moon entered the zodiac. In all the tables, the astronomical year begins when the sun enters the moveable zodiac, so that the commencement of the year is continually advancing with respect to the seasons, and makes the complete round of them in 24,000 years. From the above epoch, the mean place of the sun for any other time is deduced on the supposition that in 800 years, there are contained 292,207 days. This supposition involves the length of the sidereal year, or the time that the sun takes to return to the

beginning of the moveable zodiac, and makes it consist of 365d. 6h. 12m. 36s. To find the tropical year, or that which regulates the seasons, from this, we must subtract 21m. 55s. the time which the sun takes to move over the 54° that the stars are supposed to have advanced in the year; this gives a remainder of 365d. 5h. 50m. 41s., which is the length of the tropical year involved not only in the Siamese tables, but also very nearly in all the rest. This determination of the length of the year is but 1m. 53s. greater than that of Lacaille, a degree of accuracy not to be found in the more ancient tables of our astronomy.

The equation of the sun, or what the Siamese call the *chaia*, is calculated in their tables, for every 15° of the *matteionne*, or mean anomaly. This greatest inequality is here made 2° 12', about 16' greater than it is determined by the modern astronomy of Europe. The apogee is supposed to be 80° advanced beyond the beginning of the zodiac, and to keep always the same position among the fixed stars, or to move forward at the same rate with them. This supposition is not accurate, as the apogee gains 10" upon the stars annually; but as the motion of the Indian zodiac is nearly 4" too rapid, that of the apogee is erroneous only by 6"; which is much nearer the truth than the system of Ptolemy, where the sun's apogee is supposed absolutely at rest, so as continually to fall back among the stars, by the whole of the procession of the equinoxes. In these tables the motions of the moon are deduced by certain intercalations, from a period of 19 years, in which she makes nearly 235 revolutions. This cycle, of which the invention was attributed to Meton the Athenian, and which makes so great a figure in our modern calendars, appears to have been more exactly known at Siam by 33'; the Indians regulate their festivals by this period. The moon's apogee is supposed to have been in the beginning of the moveable zodiac, 621 days after the epoch of the 21st March, 638, and to make an entire revolution in the heavens in 3,232 days. The first of these suppositions agrees with Mayer's tables to less than 1°, and the second to 11h. 14m. 31s.; and if we consider that the apogee is an ideal point in the heavens, it argues no small accuracy of observation, to have discovered its true motion so nearly. The Siamese rules, which calculate the inequalities of the moon's motion, only for oppositions and conjunctions, make it, when greatest, 4° 56', which differs only by 1' 42" from the tables of Mayer. Cassini observes that these tables are not originally constructed for the meridian of Siam, because the rules direct to subtract 3' for the sun, and 40' for the moon, (being the motion of each for 1h. 13m.) from their longitudes so calculated. The meridian of the tables is, therefore, 15° 15' west of Siam; and it is remarkable that this reduces it very nearly to the meridian of Benares, the ancient seat of Indian learning. The same agrees very nearly with what the Hindoos call their first meridian, which passes through Ceylon and the banks of Ramancor; whence Playfair concludes that the Siamese tables came originally from Hindostan.

The Academy of Sciences possess another set of astronomical tables, which were sent to the late M. De Lisle from Chrisnabouram in the Carnatic, by father Du Champ, about 1750. They are similar to the Siamese tables, but are more regular and extensive, they are 15 in number, and include, besides the mean motions

of the sun, moon, and planets, the equations to the centre of the sun and moon, and two corrections for each of the planets, corresponding respectively to its apparent and real inequality. Du Champ has accompanied these tables with a translation of the precepts and examples which he received along with them from the Brahmins of Chrisnabouram. The epoch of these tables answers to the 10th March at sunrise in 1491, A. D. when the sun was entering the moveable zodiac, and was in conjunction with the moon; two circumstances by which almost all the Indian eras are distinguished. The places assigned by the tables to the sun and moon, agree very well with the calculations made from those of Mayer and Lacaille. The mean motions are indeed somewhat different; but as this difference equally affects the sun and moon, no error is produced in determining their relative position, nor, consequently, in calculating eclipses. The motion assigned to the sun's apogee is more rapid than that of the fixed stars by about 1" in nine years. The equation of the sun's centre is, according to these tables, 2° 10' 30", and of the moon's 5° 2' 47"; the moon's path is supposed to intersect the sun's at an angle of 4° 30', and the motions both of the apogee and node are pretty accurately determined. M. De Lisle received another set of tables, which were sent from India by father Patouillet, about the same time as the former. The name of no particular place is affixed to them; but as they contain a rule for determining the length of the day answering to lat. 16° 16', Bailly is of opinion that they probably come from Narsapour. The precepts and examples, which accompany these tables, are confined to the calculation of eclipses of the sun and moon; but the tables extend to the motions of the planets, and resemble those of Chrisnabouram, though more concise and enigmatical. They were not understood by the missionary who sent them to Europe, nor probably by the Brahmins who instructed him. M. Legentil, who deciphered them, thinks they have the appearance of being copied from stone. Bailly has determined the epoch of the precepts to be midnight, on the 17th March, 1569, A. D.

The most remarkable Indian tables that have been yet mentioned are those of Tirvalore, in lat. 10° 44', and long. 79° 42' E., according to Rennell. The solar year, according to them, is divided into 12 unequal months, each of which is the time the sun takes to move through one sign, or 30° of the ecliptic. The lengths of these months, expressed in natural days, are contained in a table, which therefore involves in it the place of the sun's apogee, and the equation of his centre. The former seems to be 77° from the beginning of the zodiac, and the latter about 2° 10' nearly, as in the other tables. In their calculations they also employ an astronomical day, which is different from the natural, being the time the sun takes to move over 1° of the ecliptic, there being just 360 of such days in a year. These tables, according to Bailly and Playfair, go far back into antiquity. Their epoch coincides with the famous era of the Calyougham, or 3102 B. C. The Brahmins of Tirvalore calculate the place of the sun for a given time, by reducing into days the interval between that time and the commencement of the Calyougham, multiplying the years by 365d. 6h. 12m. 30s., and taking away 2d. 5h. 32m. 30s., the astronomical epoch having begun so much later than the civil. By means

of certain divisions, they next find when the year current began, or how many days have elapsed since its commencement; and then, by the table of the duration of months, they reduce these days into astronomical months, days, &c. which are the same with the signs, degrees, and minutes, of the sun's longitude from the beginning of the zodiac. In a similar manner, but by a rule still more artificial and ingenious, they deduce the place of the moon at any given time, from her place at the beginning of the Calyougham. This rule is so contrived, as to include at once the motions both of the moon and her apogee, and depends on this principle, according to Bailly, that 1,600,894 days after the above mentioned epoch, the moon was in her apogee, and $7^{\circ} 0' 7''$ distant from the beginning of the zodiac; that after 12,372 days, she was again in her apogee, with her longitude increased, $9^{\circ} 27' 48' 10''$; that in 3,031 days more, the moon is again in her apogee, with $11^{\circ} 7' 31' 1''$ more of longitude; and, lastly, that after 248 days, she is again in her apogee, with $27^{\circ} 44' 6''$ more of longitude. The three former numbers enable them to find how far, at any given time, the moon is advanced in this period of 248 days; and by a table expressing how long the moon takes to pass through each degree of her orbit during that period, they find how far she is then advanced in the zodiac. This rule, says Playfair, is strongly marked with all the peculiar characters of the Indian astronomy; it is remarkable for its accuracy, and still more for its ingenuity and refinement. Though the tables of Tirvalore differ in form very much from the former, they agree with them perfectly in many of their elements. They suppose the same length of year, the same mean motions, and the same inequalities of the sun and moon, and they are adapted nearly for the same meridian. They differ, however, materially in the antiquity of the epoch from which they take their date. Although Playfair admits that such arguments may be urged, as that the Brahmans may have made observations in later times, or borrowed those of other nations, and then imagining to themselves a fictitious epoch, may have, through vanity or superstition, referred the places of the heavenly bodies to it; yet he overlooks the strong argument against their antiquity, derived from the admitted recent epochs of all the rest of the tables. Besides, after all the calculations to prove the antiquity of the tables of Tirvalore, whether deduced from modern theory or observation, what can be said to be fairly established, if it be so, but a mere coincidence, which in the absence of historical documents of indubitable veracity, may be termed accidental? We cannot, therefore, admit the maxim laid down by Playfair, that if there be given a system of astronomical tables, founded on observations of an unknown date, that date may be found, by taking the time when the tables represent the celestial motions most exactly. If we could suppose with any degree of probability that the celestial motions in such tables had been determined at the epoch to which they are thus referred, with that accuracy which the arguments drawn from the modern theory of astronomy suppose, then indeed we might be disposed to allow of the fairness of this mode of reasoning; but when we are told that to their observations many corrections must be applied, of which the Indian astronomers never heard, or of which

they never had the slightest conception, we must consider the most extraordinary coincidences obtained in this way as merely accidental; and the more especially, when we reflect, that if observations on the celestial motions were made at all with care, and for such important purposes as the relations of them give out, they must, from the nature of the observations themselves, have come very near the truth, at whatever epoch, whether earlier or later, they really took place.

From a comparison of the delineation of the Indian zodiac made by M. Legentil, with the results of modern astronomy, it appears that the longitude of Aldebaran, or the first star in Taurus, agrees within $53'$ of the truth, when calculated for the era of the Calyougham; but had the Brahmans calculated this longitude according to their own rules, they would have placed it 4° or 5° less advanced at that era, than their zodiac indicates. The moon's mean place, calculated by Mayer's tables for the same era, differs from that assigned by the tables of Tirvalore, by $57'$ or $42'$ according as the place of observation is supposed to be Benares, or a place 3° W. of it. Bailly having computed the place of the moon for the same era, by the tables of Ptolemy, found it about 12° greater than what it was by the Indian tables, and hence concluded that the latter could not have been borrowed from the former. He draws the same conclusion respecting the tables of Ulugh Belg in Tartary, which reduce the difference to a half of the above. He further concludes that, since the Arabians employed in their tables the mean motions of Ptolemy, as well as the Persians in the more ancient tables of Chrysococca and the more recent tables of Nassireddin, the astronomy of the Brahmans is neither derived from that of the Greeks, the Arabians, the Persians, nor the Tartars. The moon's acceleration computed from the tables of Tirvalore agrees with that assigned by Mayer's tables, within $3''$ nearly, whereas when computed from the tables of Chrinabouram, it agrees within $1' 7''$ for a period of more than 4000 years; the same quantity computed by a formula of Laplace, makes the difference for the tables of Chrinabouram $16' 32''$. This is one of the coincidences due to Playfair, and it is certainly very striking, but the corrections which astronomers are continually making upon their results and formulae leave us much room to doubt of the force of arguments deduced from calculations and coincidences alone. Even since Playfair wrote, Laplace, the most learned of all modern astronomers, has made many corrections on astronomical quantities which were formerly considered perfect. Playfair proceeds to enumerate several arguments in favour of the antiquity of the Indian astronomy, which is referred to a period 1200 years before the Calyougham, deduced, 1. From the length assigned to the year by the tables of Tirvalore, which differs by about $6\frac{1}{2}$ from the truth, according to Bailly, on a hypothesis which he assumes, but which cannot be relied on; but which, on another calculation by a formula of Lagrange, differs by $1\frac{1}{2}$. $6\frac{1}{2}$.—2. From the equation of the sun's centre in these tables, which differs from the result afforded by theory, by $4'$ at the era of the Calyougham, and by $2'$ only at 4300 B. C.—3. From the obliquity of the ecliptic, which differs by $8' 47''$ at the former era, and by about $2'$ at the latter. These coincidences are probably too striking to be the effect of chance, yet we cannot suppose, with

Playfair, that there is no other alternative than the antiquity of the Indian astronomy. Let us hear the reasoning of Laplace on the subject. Notwithstanding, says he, the proofs adduced by Bailly, and expounded with that clearness which he knows how to throw over the most abstract subjects, I regard what has been imagined to give in the zodiac, a common origin to the motion of the celestial bodies, as only probable. Our last astronomical tables, though considerably improved by the comparison of theory with a great number of very accurate observations, do not allow us to admit the conjunction supposed in the Indian tables; they present, even in this respect, differences greater than the errors of which they are yet susceptible. Indeed, some elements of the Indian astronomy could only have had the magnitude which their tables assign, at a period long before the Christian era; we must, for example, remount to 6000 years, to find again their equation of the sun's centre. But independently of the errors of their determinations, we should observe that they have only considered the inequalities of the sun and moon, relatively to the eclipses in which the annual equation of the moon is added to the equation of the sun's centre, and increases it by a quantity very nearly equal to the difference between its true value and that of the Indians. Many elements, such as the equation of the centres of Jupiter and Mars, are very different in the Indian tables, from what they ought to be at their first epoch: the whole of these tables, and above all the impossibility of the general conjunction which they suppose, prove that they have been constructed, or at least rectified, in modern times. Besides the results of the mean motions which they assign to the moon with relation to her perigee, to her nodes, and to the sun, and which are more rapid than what Ptolemy assigns, indicate that they are posterior to his astronomy; for we know by the theory of universal gravitation, that these three motions have undergone an acceleration for a very great number of centuries. Thus this result of theory, so important to lunar astronomy, serves also to rectify chronology. Nevertheless, the ancient reputation of the Indians, does not permit us to doubt, that they have in all ages cultivated astronomy. When the Greeks and the Arabs began to turn their attention to these sciences, they went to India to learn their first elements. It is from India that we derive the ingenious method of expressing all numbers by ten characters, by giving them both an absolute and a relative value,—an idea both refined and important, which appears notwithstanding so simple, that we do not easily perceive its merit. But this very simplicity, and the extreme facility with which we are enabled to perform all calculations, places our system of arithmetic in the first rank of useful inventions; and we may appreciate the difficulty of arriving at it, when we consider that it escaped the genius both of Archimedes and Apollonius, two of the greatest men, of whom antiquity can boast. Notwithstanding, therefore, the enumeration of the nine astronomical elements upon which Playfair builds his arguments in favour of the antiquity of the Indian astronomy, it is evident from the admissions of Laplace, that we can place no dependance on the results respecting the celebrated era of the Calyougham. Indeed, M. Delambre in his celebrated work, the History of Astronomy, after a dispassionate examination

of the claims of the various nations, concludes, that however ancient the rude observations of the Chinese and Indians may be, they possessed no science properly so called, but what they obtained from the Greeks through the medium of the Arabs; who after deriving it from that source, carried it into Persia, whence it was transmitted to India and China.

Playfair considers the argument which regards the originality, and of course the antiquity of the Indian tables, as incomplete, till the geometrical principles employed in their construction, are examined. In this we entirely agree with him, and though we are not of the same opinion as Delambre, that the Indians borrowed their astronomy from the Greeks, we still think that the latter may have been indebted to the former for many lessons both in astronomy and mathematics. Indeed we would rather steer a middle course between these eminent philosophers, and admit that the Indians had derived their knowledge partly from the Chaldeans, and partly from the Egyptians, while they either invented several mathematical propositions, or derived them from the same source from which they derived the astronomy. The first argument adduced by Playfair in support of the antiquity of the astronomy of the Indians, as resulting from their knowledge of mathematics, appears to us to be a complete *non sequitur*. To find the time of the sun's continuance above the horizon, they observe the shadow of a gnomon on the day of the equinox at noon, when the sun, as they express it, is in the middle of the world. The height of the gnomon is divided into 720 equal parts, in which parts the length of the shadow is also measured. One-third of this measure is the number of minutes by which the day, at the end of the first month after the equinox exceeds 12 hours; four-fifths of this excess is the increase of the day during the second month; and one-third of it, is the increase of the day during the third month. Now Playfair admits that this rule involves the supposition, that, when the sun's declination is given, the same ratio every where exists between the arch which measures the increase of the day at any place, and the tangent of the latitude. This supposition is only an approximation applicable to latitudes near the equator, and though the rule founded on it, may be safely applied in countries between the tropics, it would, in those that are more remote from the equator, lead into errors too considerable to escape observation. Yet he argues that this rule is the simplification of a more general one, adapted to the circumstances of the torrid zone, and suggested to the astronomers of Hindostan by their peculiar situation! It is too much to ask us to believe that the Indians had discovered a general rule, which the nature of their situation, on his showing, not only precluded the necessity of applying in all its generality, but rendered it highly improbable that they would ever have thought of; we might as well argue that Archimedes was acquainted with the modern ratio of the diameter of a circle to its circumference, because he has transmitted to us the earliest approximation. The argument deduced from their mode of calculating an eclipse is more plausible. Having obtained the ascensional differences by the above means, they apply them to a table which they have calculated of the right ascensions of the ecliptic in time, in order to have the time which each of the signs take to descend below the horizon of

that place. This method is the same as that which the most skillful astronomer, in such circumstances, would adopt. Their table of right ascension is only for a few points in the ecliptic, namely, the beginning of each sign, and is only carried to minutes of time or tenths of a degree. It is calculated so far as it extends, with accuracy, the obliquity of the ecliptic being supposed 24° . Such calculations no doubt require a knowledge of spherical trigonometry or of some method equivalent to it. But, as Playfair remarks, if we would allow the authors of these tables to be possessed of the least possible skill, we may suppose that the arches were measured on the circles of a large globe or armillary sphere, such as we know to have been one of the first instruments of the Egyptian and Greek astronomers. Whatever method was adopted, it must have been so far accurate, as there are some of the tables where the arches are true to seconds, a degree of accuracy scarcely afforded by any mechanical method. In calculating the semiduration of a solar eclipse, they subtract from the square of the sum of the semidiameters of the sun and moon, the square of a certain line, which is a perpendicular from the centre of the sun on the path of the moon; and they extract the square root of the remainder, which is the measure of the semiduration. The same calculation is practised in lunar eclipses. Such operations are all founded on a very distinct conception of what takes place in an eclipse, and imply the knowledge of the celebrated theorem attributed to Pythagoras, that in a right angled triangle, the square of the longest side is equal to the squares of the other two sides. No argument, however, of any weight can be deduced from the existence of the mere knowledge of this theorem alone in India. Pythagoras may have brought it thence into Greece, in which case, the story of his ecstasy at having discovered it must be a fabrication, without at all carrying any knowledge of astronomy along with it, as it is evidently not in any way necessary to the construction of the astronomical tables above mentioned, but only to the calculation of the duration of an eclipse.

The rule described in M. Legendre's memoir on the Indian astronomy, for finding the difference between the true and apparent conjunction at the time of a solar eclipse, contains the calculation of the moon's parallax, but substitutes the parallax in right ascension for the parallax in longitude, an error which Playfair thinks, the authors of this astronomy would probably have avoided, had they derived their knowledge from the writings of Ptolemy. From this supposed parallax in longitude they next derive the parallax in latitude, where there is an application of the doctrine of similar triangles; (no deep application, however!) for they suppose the former parallax to be to the latter in the constant ratio of 25 to 2, or nearly as the radius to the tangent of the inclination of the moon's orbit to the plane of the ecliptic. Playfair, in his zeal for the science of the Indians, gives them credit here for another wonderful stretch of intellect, namely, the supposition that a small portion of the sphere on each side of the point which the sun occupies at the middle of an eclipse, may be held to coincide with a plane touching it in that point! It would be useless, however, to enumerate all the arguments adduced by this elegant writer, in support of the claims of the Indian astronomy to antiquity, founded either on the nature of the

tables themselves, or the knowledge of geometry, which they seem to imply. He gets involved in a series of calculations, from which he does not easily extricate himself, and when extricated, his discovery amounts only to a probable hypothesis. From that hypothesis, which he lays down as the basis of this astronomy, he concludes, that there exists a remarkable affinity between the system of the Brahmins and that of Ptolemy. In the Ptolemaic system, the same thing was supposed for the five planets, that appears in the former to have been universally established, namely, that their orbits were circles, having the earth within them, but removed at a small distance from the centre, and that each planet described the circumference of its orbit, not with an uniform velocity, but with one that would appear uniform, if it were viewed from a point as far above the centre of the orbit as that centre is above the earth. This point was, in the language of the Ptolemaic system, called the centre of the Equant. Concerning this coincidence, he admits that it is difficult to judge, as on the one hand, it cannot be ascribed to accident; and on the other, it may be doubted, whether it necessarily arises out of the nature of the subject, or is a consequence of some unknown communication between the astronomers of India and Greece. So far it appears ascribable to the nature of the subject, but he seems inclined to believe that if a communication did exist, it is more likely to have gone from the former region to the latter, than in the opposite direction. The calculations, however, that were employed in this astronomy must have required the assistance of many subsidiary tables, of which no trace has yet been found in India. Besides many other geometrical propositions, some of them also involve the ratio which the diameter of a circle was supposed to bear to its circumference. This ratio, Playfair admits, cannot be discovered exactly from these calculations, on account of the small quantities, which, he supposes, may have been neglected in their calculations; he, therefore, refers to a passage in the *Ayee Akbery*, where we are told that the Hindoos suppose the diameter of a circle to be to its circumference as 1250 to 3927, and where the author, who knew that this was more accurate than the proportion of Archimedes (7 to 22) and believed it to be perfectly exact, expresses his astonishment, that among so simple a people, there should be found a truth, which among the wisest and most learned nations, had been sought for in vain. It cannot be denied that this is a very near approach to the rectification of the circle; it differs little from that of Metius, 113 to 355, and is the same with one equally remarkable, that of 1 to 3.1416. When found in the simplest and most elementary way, it requires a polygon of 768 sides to be inscribed in a circle; an operation which cannot be arithmetically performed without the knowledge of some very curious properties of that curve, and at least nine extractions of the square root, each as far as ten places of decimals. All this, says Playfair, must have been accomplished in India; for it is to be observed that the proportion in question, could not have been received from the mathematicians of the west. The Greeks left nothing on this subject more accurate than the theorem of Archimedes; and the Arabian mathematicians seem not to have attempted any nearer approximation. The geometry of modern Europe can much less be regarded as the source of this knowledge.

Metius and Vieta were the first who, in the rectification of the circle, surpassed the accuracy of Archimedes; and they flourished at the very time when the Institutes of Akbar were collected in India.

From the whole of the arguments which Playfair adduces in favour of the antiquity of the Indian astronomy, he draws the following general conclusions:—1. The observations on which this astronomy is founded were made more than 3000 years B. C.; and, in particular, the places of the sun and moon were determined by actual observation. 2. Though the astronomy which is now in the hands of the Brahmins is so ancient in its origin, yet it contains many rules, and tables of later construction. 3. The basis of the four systems of astronomical tables on which its antiquity rests, is evidently the same. 4. The construction of these tables implies a great knowledge of geometry, arithmetic, and even of the theoretical part of astronomy. In addition to the remarks which we have made while discussing the facts and arguments on which these conclusions are founded, and from which it sufficiently appears that they are not so clear and irrefragable, as to induce a belief in an unprejudiced mind, that the antiquity of the Indian astronomy is so great as its eloquent advocates would have us to believe, we may adduce some observations from Bossut, an able historian of the Mathematical Sciences, and a man well qualified by his attainments to judge of its pretensions. He says, all that relates to the origin of the celebrated Hindoo periods is enveloped in thick darkness; every thing in it, is the work of system; it proceeds only by the help of conjectures and bold suppositions; it is frequently contradictory and always questionable. As to the theories which Cassini pretended to discover in the Siamese tables, they may have been simply the result of a long series of accurate observations; but it may be suspected, that through the illusion of his own profound knowledge, he rather conjectured or introduced these theories into the Indian MS. than found them there. Those, however, who would avail themselves of his authority can only carry the date of the Indian astronomy up to the time of Pythagoras, who probably diffused the knowledge he had acquired in Egypt and elsewhere, among the people of Hindostan. Bossut places as little confidence in the account which M. Legendre gives of the astronomy of the Brahmins, and we think his argument is conclusive. He says, we may judge of the astronomy of the early Brahmins, from the science of their present posterity. For a long time they have ceased to take observations of the heavenly bodies; astronomy is to them merely a traditional science, to which they have added no new views, and no discovery that has in the least tended to its advancement; their principal object is to know the motions of the sun and moon, which they calculate according to the methods of their forefathers. From a review, therefore, of the whole that has yet transpired respecting the Indian astronomy, its antiquity appears to be only a fine philosophical reverie, in which modern astronomers indulge merely to show their acquaintance with science, and perhaps its origin may be traced to a lurking desire in their own minds to offer some excuse to the world for their scepticism and inveterate hatred to the authority of the sacred writings. This splendid show of knowledge may dazzle the eyes of persons ignorant of the subject, but it also blinds those of the individuals who make it, with such an excess of vainglory, that they are unable

to distinguish truth from error in the midst of their learned, but, nevertheless, futile speculations.

The claims of the eastern nations to the first discoveries of science, resting on their pretensions to an astronomy which goes far back into antiquity, it seemed necessary, in recounting the history of the sciences of the ancients, to settle this point first, before proceeding to those records upon which we can with more certainty depend. We now turn with pleasure to the achievements of the Greeks, those masters of the intellectual world, whose authority in regard to the arts and sciences holds Europe in thralldom to the present day. Among this wonderful people, the first authentic periods in the history of human knowledge seem to begin. A succession of schools or sects of philosophers arose in Greece, and shed a glory over that favoured country. The Ionic school was founded by Thales, about 640 years before the Christian era. His knowledge, however flattering an account of it may have been given in the text, appears to have been but superficial; it could not be otherwise in those early times. We are not to suppose there was much accuracy in the discoveries attributed to him. His geometrical knowledge appears to have been very limited; for, although the invention of the method of measuring angles by means of the circumference of the circle is ascribed to him, yet he could not apply it in practice, being obliged to ascertain the heights of the pyramids of Egypt by their shadows, a method which every school-boy adopts. Neither can we suppose that he applied the trigonometrical mode of measuring angles which he proposed, to the mensuration of the apparent diameter of the sun, otherwise he could never have deviated so wide of the truth as to make it half a degree. It is difficult, however, to ascertain the real amount of knowledge possessed by such a man; the founder of an early philosophical sect, his opinions and discoveries were apt to be confounded with those of his disciples, especially at a period when the art of recording and transmitting correct information, without the obvious interposition of Divine agency, was unknown. Anaximander, Anaximenes, and Anaxagoras, his immediate successors, continued the Ionic line, and taught the doctrines of the same school under various modifications. The inventions ascribed to the two former in the text, are sufficiently striking and ingenious; but they are to be understood with considerable limitations. The rude state of the fine and mechanical arts at that period, prevent us from believing that the globes, maps, and dials ascribed to these inventors were at all to be compared to the elegant apparatus which goes under the same name at the present day. If the early mathematicians described their diagrams with a stick on the sand of the sea-shore, we cannot conceive that the early geographers and astronomers could employ any other means but such rude workmanship as they were able to depict on wood and stone with a style, or on the papyrus and parchment with a reed. Hence, the halo of glory with which our imaginations invest the names of these early sages is all artificial, and has little foundation in nature. Though their knowledge, says Professor Leslie, appears to have been quite superficial, it was not the less aspiring. They indulged in cosmological systems, which pretended to explain the origin and formation of all things. Such bold speculations flattered human vanity, and charmed the imagination by a glittering semblance of truth. Those

early sages held every substance whatever to be composed of four distinct elements, earth, water, air, and fire, merely combined in various proportions. Earth and water they viewed as naturally ponderous and inert, while they fancied air and fire endued with elastic virtue to possess lightness and activity. While the earthy matter settled towards the centre of the world, and the aqueous fluid rolled along the surface of the globe; the air and fire, or ether, soared aloft, the former occupying the whole region below the moon, and the latter streaming through the boundless extent of space. The same pure lambent fluid, being collected into globular masses, formed the groups of stars. But portions of its divine essence descended to animate the vital spark. Such visions, so like the colouring of fantastic dreams, were yet firmly believed in former ages; they became afterwards incorporated with the vulgar creed, and still deeply tincture the language of poetry.

The necessity of distinguishing the stars from each other, for the purpose of determining the seasons, had long before this period, given rise to the scheme of arranging them in groups or constellations. This arrangement, rude at first and fanciful, was brought to some kind of perfection about the time of Thales and Anaximander. The Greeks augmented or improved the ancient nomenclature of the stars, which probably partook of the simple and uncultivated nature of those people with whom such knowledge had first originated. The powerful and lively imagination which marked all the conceptions of the Greeks, concealed the natural arrangement and names of the constellations under pleasing and graceful imagery. Thus, according to Bossut, the group of stars called by the name of Pleiades, derived from a word signifying a multitude, was feigned to be the daughters of Atlas and Pleione; and the great star, to which they gave the appellation of Orion, signified a giant of that name, who was enamoured of them, and pursued them incessantly as in the heavens. In this manner did the Greeks fill the skies with fabulous and historical emblems, derived, no doubt, at first, from the Egyptians and Chaldeans; but smitten with the love of vanity, this grand nation (the French of antiquity,) attributed all those curious and fanciful representations to the early periods of their own history, or that of their deities, while they despised the claims of every other country, and looked upon all the surrounding nations, as appears by the appellation they bestowed upon them, in no other light than that of barbarians. The constellations in which the sun, moon, and planets were always found in their annual career from west to east, first occupied the attention of astronomers; it was called the zodiac, from the living animals which these constellations represented, and it extends about 8° on each side of the equinoctial. This zone or belt in the heavens, is divided and arranged nearly in the same manner among all nations, which shows that it must have had a very early origin; but the reasons assigned for the differences are so imaginary and contradictory, that it is almost impossible to determine to what nation the honour of the invention is due. Indeed, if this point could be properly ascertained, all the obscurity which hangs over the early history of science, and astronomy in particular, would vanish. The most ancient and most probable opinion is, that the zodiac of the Greeks was borrowed from the Egyptians, as we have already suggested. At the period of the

appearance of those sages in Greece, whose names we have mentioned above, it assumed a regular form; it afterwards spread throughout Europe, and was adopted as it now exists; it probably travelled eastward to India, where it underwent similar alterations to those which it experienced in Greece. The usual Latin names of the zodiacal constellations are as follows: Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricornus, Aquarius, Pisces. Many attempts have been made to arrange these names both in Latin and English verses, for the purpose of assisting the memory; we may perhaps be excused for adding ours to the number, by the following half musical, but not metrical stanza:—

The Ram, the Bull, the Twins, the Crab,
The Lion, and the Virgin;
The Balance, Scorpion, Archer, Goat,
The Waterman; and Fishes.

It is a question among the learned, whether the five planets, Saturn, Jupiter, Mars, Venus, and Mercury, were known before the Greeks studied astronomy. The brilliancy of some of these planets, the steadiness of their light, and the changes which take place in all their motions, render it almost impossible that they should have escaped the observation of the early astronomers. Their gradual motions from west to east must have been remarked; but it is doubtful whether the Grecian astronomers, at the time of the formation or adoption of their zodiac, had sufficiently accurate ideas of the inclinations of the orbits of the planets to the ecliptic, so as to comprise them within the limits assigned by the moderns. The most learned astronomers are of opinion, indeed, that the first accurate observations which were made of their motions and appearances do not remount to a more remote period than three centuries before the Christian era. The intricate nature of these motions require much time and observation, besides correct instruments, to unravel and explain them in a plausible manner. Mercury being frequently immersed in the sun's rays would occasion much difficulty in this respect. Hence it is probable that the first zodiac of the Greeks comprised only the paths of the sun and moon, whose orbits cut each other at an angle of 5° 8'. 799 according to Laplace. If we are therefore, unwilling to allow that refined and intellectual people the merit of having discovered the true apparent motions of the planets, it can hardly be expected that we should yield the palm to the feeble and effeminate Asiatics, as the advocates of the antiquity of the Indian astronomy would have us to do; for it cannot be supposed that nations who have groined under the despotic sway of their fellow creatures for ages, have ever been capable of any great mental achievement. The supine indolence which prevents man in those eastern climes from using his reason and physical strength in the attainment and preservation of his natural liberty and proper rank in the scale of society, must have had an equally enervating effect on his intellectual pursuits. Hence we may infer a priori that no great philosophical discoveries could possibly arise among such besotted nations, who from the whole course of their history, as appears even from their own boasting accounts, seem to have been little better than mere vegetating animals. Science and liberty are in fact inseparable companions; and even the history of ancient Greece, as well as that of modern Europe, is not without illustrious examples of

the attempt to destroy the one by the deprivation of the other.

The Italian school was founded by Pythagoras, one of the greatest geniuses which Greece ever produced, about 590 years B. C. He was a native of the Island of Samos; and on his return from those travels into Egypt, Phenicia, Persia, and India, during which he had acquired that vast fund of knowledge for which he was so renowned, he was viewed with awe and veneration by his countrymen at the celebration of the Olympic games. To him philosophy is indebted for that modest and auspicious name which it now bears; while other learned men, his predecessors and contemporaries, had received or assumed the appellation of *Sophists* or Wise men, he aspired only to the honour of being called a *Philosopher* or lover of wisdom. According to some authors, he had studied under Pherecydes, and Pherecydes under Pittacus; but with respect to mathematical and mechanical researches, it does not appear that he had derived much original information from his teachers. His own powerful genius seems to have directed him in his researches, and enabled him to make those discoveries which have rendered his name so famous. In proof of our preceding remarks respecting the connexion between true science and the love of freedom, we may observe that Pythagoras on his return from those countries whither he had travelled in quest of knowledge, found his native Island Samos under the dominion of the tyrant Polycrates, and went as a voluntary exile to seek a tranquil retreat in a corner of Italy. At Croto, says Ovid, he studied and taught the laws of nature.

"From human view, what erst had lain concealed,
His piercing mind to open light revealed;
To patient toil his ardent soul constrained,
Of Nature's richest stores possession gained:
And thence with glowing heart and liberal hand,
He dealt her treasures o'er the listening land.
The wondering crowd the laws of Nature hears,
And each great truth in silent awe reveres."

According to the elegant account of this illustrious philosopher given by Bossut, never man more ardently sought glory; never man more deserved it, or raised himself to a higher pitch of reputation. He had all the ambition of a conqueror, but it was an ambition of a different kind; he was full of zeal for extending the empire of the sciences; and his school at the voluptuous city of Tarentum on the coast of Calabria, acquired such a celebrity, that he reckoned princes and legislators among his disciples. The combinations of numbers formed one of the principal objects of his researches; and all antiquity testifies that he carried them to a wonderful extent. He clothed his philosophy in emblems, which, necessarily, differing in some measure from the ideas they were intended to represent, became still more obscure in process of time, and occasioned whimsical systems to be attributed to him, which we could hardly suppose to have been the productions of so great a genius, did we not know there is often but a step between the sublime and ridiculous. Some authors give out that he is at the head of the inventors of the ancient Kabbala; that he attached several mysterious virtues to numbers, and swore by nothing but the number 4, which was to him the number of numbers; that he likewise discovered various marvellous properties in the number 3, and said that a man perfectly skilled in arithmetic possessed the *sovereign good*. Such opinions are indeed introduced into some

of his dialogues by the witty satirist Lucian, where he speaks about the Pythagorean doctrine of the transmigration of souls, and their great oath, the oath 4, which is equal to ten, and is ineffably powerful. But we all know the liberties that are taken by satirists in making any subject ridiculous; besides, as Bossut properly says, if he did advance such propositions, were they to be taken strictly according to the letter? Is it not more probable, either that his words were erroneously reported, or that they included allegories, with the meaning of which we are unacquainted? This conjecture appears to be the better founded, as according to other authors, Pythagoras, having never written any thing on the subjects of his own philosophy, his doctrines were for a long time solely preserved among his disciples; and that afterwards, Plato, with other philosophers, committed them to writing when corrupted by vague and confused tradition. Aware of the force of the prejudices of mankind, those idols which Lord Bacon ages afterwards, so fancifully, but justly described, he appears cautiously to have introduced those doctrines to public notice, wherein he differed from the mass. Not to shock the prejudices of his countrymen, says Professor Leslie, Pythagoras judged it expedient to separate the doctrines he taught into two distinct sorts—the *Exoteric* and the *Esoteric*. The former consisted in discourses addressed to the people in the temples and other public places, and calculated to reform their manners and dispositions; the latter comprised those recondite principles communicated only to the very few disciples, who, after a very long and severe probation, were esteemed fit and safe depositories of such truths. Of all the arithmetical discoveries of Pythagoras, time seems only to have respected his multiplication table, which forms the basis of all our knowledge in the science of numbers even at the present day. The taste, however, for investigating the properties of numbers, with which he inspired his scholars, gave rise to some very ingenious theories; such, for instance, as that of figurate numbers, which was unfolded by degrees, and of which many useful applications have been made. The mystery of the number 4 being equal to 10, which Lucian ridicules, because evidently he was no mathematician, can be easily explained on the principle of one class of these numbers, called triangular; according to which, if we construct an equilateral triangle of points having *four* for the base, and consequently *four* in each of the sides, filling up the inside space with one point to render the parallel and slanting rows complete, we shall have exactly *ten* points in the figure. Hence, 10 is called a *triangular* number, whose base is 4, and this is evidently what the Pythagoreans meant when they said 4 was equal to 10, if ever they used such an elliptical expression.

Any one who wishes to see this subject more fully explained, will find a complete and beautiful account of it in the third edition of the translation of Euler's Algebra, p. 140.

Such appears to be the earliest authentic accounts we have of the progress of the ancients in the science of arithmetic. It was evidently slow from their mode of notation, or the plan of representing numbers by the letters of their alphabets, which was probably the practice of all the nations of antiquity. The Jews, the Greeks, and the Romans, are particularly distinguished for this system of notation, which must necessarily have rendered their calculations exceedingly complex and embarrassing when carried to

any great extent, and operated as an insuperable bar to the advancement of the other sciences. We all know how learned Europe received with avidity the improvement which Napier introduced into calculations by means of his logarithms, at a period when the moderns had just begun to feel their own strength, and were about to take an amazing flight towards the top of the pyramid of science. Had the ancients, especially the Greeks, possessed our arithmetical system of notation, it is impossible to say how far they might have extended their discoveries; but of this we are sure, that they would have left fewer regions of knowledge unexplored, and fewer mathematical investigations unattempted, which now form the boast and the glory of later times. Nor can we sufficiently wonder that this invention, which evidently came to us from India, should have had its origin there; we are even tempted to suggest that it may have been transmitted from Phenicia, a country to which Strabo the Greek geographer, refers the invention of writing and arithmetic. The establishment of this opinion would find the less difficulty, because the Phenicians being the most ancient mercantile nation, must naturally have improved a science of which they were making constant use; but the principles of arithmetic must have been equally known to the Egyptians and Chaldeans, and it is impossible at this distance of time to discover the precise mode of notation and calculation employed by these early nations. The chain of arithmetical discovery is not so perfect as that of the other sciences during the career of the Greek mathematicians and philosophers, and we therefore leave it for a time, to speak of that for which they are most distinguished, their geometry: suffice it to say, that they must have been acquainted with the ordinary arithmetical operations of the four common rules, some methods of extracting square and cube roots, and the theory of proportions and arithmetical and geometrical progressions.

Pythagoras has rendered his name immortal in the annals of geometry by the discovery of that beautiful and fertile theorem, which now forms the forty-seventh proposition of Euclid's elements, namely,—that the square described on the hypotenuse or longest side of any right-angled triangle, is equal to the squares described on the other two sides. It is related that he was so transported with joy and gratitude to the gods for having inspired him with this discovery, that he offered upon their altars, the costly sacrifice of a hecatomb, or 100 oxen. Such a fact, however, cannot well be reconciled with his moderate fortune, and still less with the opinions attributed to him respecting the transmigration of souls, which rendered all animals sacred, and which probably he brought from India, if he ever held them; as a similar veneration, at least for one class of animals, prevails among the Bramins to the present day. Ancient authors indeed differ widely among themselves on these points; but whatever may have been the case, it is certain, that never had enthusiasm in science a better foundation. Pythagoras, like all great inventors, seems to have had a foresight of the value of his discovery to future ages, and of the magnificence of the edifice which would be built upon it by posterity. He himself derived several beautiful consequences from it, among which was the incommensurability of the diagonal of a square to its side. This discovery also led to many others which were made by his scholars and contemporaries, respecting

several general properties of other incommensurate lines in geometry, and numbers in arithmetic. Pythagoras is also said to have been the discoverer of the valuable theorem which now forms the thirty-second of Euclid's elements, namely, "that the three angles of every triangle are equal to two right angles;" a proposition, even more important than the former, in as much as it is the foundation of the whole science of trigonometry, the most practical and valuable of all the mathematical sciences. The discoveries of this immortal genius in astronomy are so admirable, that some of the moderns have doubted whether he really made them, or whether they were mere conjectures. He is said to have clearly demonstrated the sphericity of the earth, which Anaximander had only conjectured, by observing that any given star appears to occupy a higher or lower station in the heavens according to our position on the surface of the earth, and he therefore concluded contrary to the testimony of the senses, that that surface is not a plane, but a spherical superficies. His most extraordinary discovery however, and that which connects his name with those of the greatest men of modern times, Copernicus and Newton, is the true theory of the solar system, which places the sun in the centre of the planetary worlds, and supposes that the earth revolves around it along with all the other visible planets dispersed throughout the regions of celestial space. What were his precise opinions on this subject, it is difficult to ascertain at the present day; being directly opposed to the natural phenomena and the vulgar prejudices of mankind, he contented himself with communicating it in secret to his scholars; and they were taught after his death by Philolaus, about 450 B. C., as well as by Nicetas and others of the same school, as appears from the writings of Cicero. The fear of exposure for their opinions seems to have greatly influenced these early philosophers in the caution with which they submitted them to the public. This was evidently not without reason, for about a century afterwards, Anaxagoras was accused of impiety, and condemned to banishment from the intellectual city of Athens, for asserting that the sun was a mass of fiery matter; and it is added by historians, that nothing but the influence of Pericles his friend and disciple, saved him from the punishment of death. The discovery of Pythagoras that Lucifer and Hesperus, or the morning and evening star, were the same planet, Venus, sufficiently shows that he had paid attention to the planetary motions. The theory of music appears to have been indebted to the same genius for its origin, but the accounts of authors, in this as in former cases, are various. According to Bossut, Nicomachus, who wrote on arithmetic about 400 B. C., relates, that Pythagoras passing a forge one day where the workmen were hammering a piece of iron on the anvil, was surprised to hear sounds which accorded with the intervals of the fourth, fifth and octave; that reflecting on the cause of this, he imagined that it depended on the weight of the hammers; and that accordingly, having caused them to be weighed, he found that when the weight of the heaviest hammer, answering to the fundamental note, was represented by unity, the weights of the other three, answering to the fourth, fifth, and octave above, were as 3-4ths, 2-3ds, and one half. The same author adds, that on his return home, he verified this experiment in another way, as follows:

fastening a string to a fixed point, and passing it over a peg in a horizontal line with this point, he stretched the string more or less by different weights; and on causing it to vibrate, he found the weights corresponding to the fourth, fifth, and octave above, to be to each other as the weights of the smith's hammers. The whole of this story, says Professor Robison, who cites it from Iamblichus, has the air of fable and of ignorance. The sounds given by a smith's anvil have little or no dependence on the weight of the hammers: and the weights which are in the proportions of the numbers above mentioned, will by no means produce the sounds alleged. It requires four times the weight to make a string sound the octave, and twice and a quarter will produce the diapente, or fourth, and once and seven ninths will produce the diatessaron or fourth. It is plain, therefore, continues the Professor, that they knew not of what they were speaking; yet on this slight foundation, they erected a vast fabric of speculation; and in the course of their researches, these ratios were found to contain all that was excellent. The attributes of the divinity, the symmetry of the universe, and the principles of morality, were all resolvable into the harmonic ratios! It is evident, however, as was formerly remarked, that Pythagoras ought not to be blamed for all the fanciful theories which were fabricated by his disciples; neither are we to conceive that every notion attributed to the Pythagorean school, was the offspring of its noble founder. Professor Leslie, in the following truly poetical passage, probably pays a more just tribute to the merits of this extraordinary genius. Having, says the Professor, his imagination full of numerical relations, he founded the theory of music, which he cultivated both as an art and a science. But he transferred his ideas of music to the harmony of the celestial motions. Rising to the sublime conception of the true system of the universe, he seems to have veiled that noble discovery in a fine allegory. Under the symbol of Apollo playing on the lyre, he taught his chosen disciples, that all the planets, including likewise our earth, are inhabited worlds, which revolve about the sun as their common centre; and he farther maintained, that those bodies, while they circle round the great luminary, perform a most harmonious concert, though such ravishing and heavenly sounds are lost to our gross ears, and drowned amid the jarring noise which prevails here below.

Almost all the Grecian philosophers from the time of Pythagoras, cultivated the sciences of geometry and astronomy, and the propositions which constitute the bulk of what is now called elementary geometry, were invented by them. Cleostratus, an astronomer of the Island of Tenedos, who flourished about 550 B. C., proposed the lunisolar period (called *Oetateris*); for the regulation of the calendar, this period was composed of four subordinate periods of two years each, in which one lunar month of thirty days was intercalated only three times; and the three intercalary months were added at the end of the third, fifth, and eighth years. This period is very simple and obvious; it would be perfectly accurate if the solar year consisted of 365 1-4th days, and the lunar year of 354 days. It was soon discovered that this period differed widely from the truth, and two Athenian astronomers, Meton and Euctemon, having proposed one more correct, for a time enjoyed all the glory of individuals who had made a perfect discovery. By

a sagacious combination of all the observations then known, they formed a lunisolar period or cycle of 19 solar years, the use of which was adopted on the 16th of July, in the year 433 B. C. It was called the Metonic cycle, no doubt, says Bossut, because Meton was the person principally concerned in its invention. This period in which are observable an extensive astronomical knowledge and apparently great accuracy, had such reputation in Greece, that its order was engraved in letters of gold, whence it acquired the name of the Golden Number. For a long time it served as a basis in calculating the calendar among all the nations in Europe; and it is even still retained in use, by the help of certain modifications and changes, which it is found occasionally to require; for in astronomical strictness it is defective with regard to the motion both of the sun and moon. About this period, during which Socrates flourished, the Greeks seem to have made considerable progress in the manufacture of glass, as an invention, which was afterwards to be of the greatest use in astronomy, namely, that of burning-glasses, appears to have been well known. This is proved to every classical scholar by the quotation of a passage in the second act of the comedy of Aristophanes entitled *Nephelai*, or "The Clouds," where he introduces Socrates giving lessons to Strepsiades, a cunning Athenian. The subjects of these lessons are purposely made trifling, in order to make that great philosopher appear ridiculous, and are supposed by some to have had the ultimate effect of causing him to be put to death. Strepsiades, after asking him (in the comedy) how he should avoid paying his debts, proposes the following expedient:— "*Strepsiades*, You have seen at the druggist's that fine transparent stone with which they kindle fires? *Socrates*, You mean glass don't you? *Strepsiades*, The very thing. *Socrates*, Well, what will you do with that? *Strepsiades*, When a summons is sent me, I will take this stone, and placing myself in the sun, (i.e. out of the shade) I will melt all the writing of the summons at a distance." Such a passage is curious, not only as an irrefragable proof of the antiquity of burning-glasses, but as an evidence of the mode of writing then practised, which was by tracing the words in wax spread upon a tablet. It is indeed remarkable that possessing such a common and practical knowledge of the effect of a lens, as this instance affords, the Greeks were not better acquainted with its magnifying powers, and that they fell short of the invention of the telescope, which is so simple and easy an application of it. But truly at such facts in the history of man we need not wonder, when we reflect, that though apples and stones fell to the earth in all ages, it was only in the seventeenth century that the observation of this simple phenomenon led to the discovery of the sublime principle of universal gravitation.

While the progress of the true principles of natural philosophy in Greece, was slow and obscure, perplexed with error and enveloped in doubt and mysticism, the march of the mathematical sciences was rapid, splendid, and triumphant. Empedocles of Sicily, between the 4th and 5th century before the Christian era, introduced into philosophy, the notion that all bodies consisted of infinitely small corpuscles in a state of perpetual motion, held together by the inherent force of matter, yet kept separate by the resistance of its action. These opposite principles, which he termed according to the

figurative style, friendship and enmity, are very similar to the forces of attraction and repulsion invented by the moderns. About the same period, or shortly after, Xenophanes transplanted most of the Pythagorean tenets into the small sect of philosophers, which he established at Elea in Campania. According to Professor Leslie, he had the merit of being the first to state the important principle in Geology, that the exterior crust of our globe was once in a fluid state, and that the fossil shells and other exuvie discovered in the bowels of the earth and on the tops of the highest mountains, had at some remote period been formed under the waters of the ocean. Leucippus who sprung from that school not only taught the doctrine of atoms, but maintained the existence of a separate *plenum*, and anticipated the influence of centrifugal force. These doctrines were extended and improved by his disciple Democritus, who flourished during the time of the Peloponnesian war. In his garden at Abdera, he passed a long and secluded life, chiefly occupied in investigating the operations of nature. He rectified many errors in physics, but fell into others of his own. He showed the existence of a *plenum* to be incompatible with local motion, and rejected the doctrine of *levity*, a quality which was attributed to the elements of air and fire; he maintained that the weight of bodies is always proportional to their mass or quantity of matter, and that they would consequently fall in a vacuum with equal celerities; and he likewise entertained tolerably correct general views concerning the properties of heat and light. These tenets were afterwards expounded in the elegant poem of Lucretius on the "Nature of Things," where he applies to his master in philosophy the fervid expression, "pater et rerum inventor." Such was the progress of philosophy, when mathematics was about to receive an impulse which was productive of the happiest effects to science. (Enopidus of Chios, about 480 B. C., had resolved some very simple problems, which now form a part of the first book of Euclid's elements. Zenodorus his contemporary, made farther advances, however, by showing the falsity of the opinion at first entertained by geometers, that figures, with equal perimeters must have equal areas. The demonstration of this truth, was not easy to discover in the infancy of science, and it therefore proves that geometry had then made considerable advances. The ingenious theory of the regular bodies originated about this period in the Pythagorean school. Hippocrates of Chios, about 450 B. C., invented the famous *lunula* of the circle which still retain his name. Having described three semicircles on the three sides of a right-angled isosceles triangle as diameters, that on the hypotenuse lying in the same direction as the others, he found that the sum of the areas of the two equal lunes, comprised between the two quadrants applied to the hypotenuse and the semicircles applied to the other two sides, was equal to the area of the triangle. This was the first instance of curvilinear spaces being found equal to a rectilinear one, and probably originated in an attempt at the quadrature of the circle. Hippocrates appears to have been one of the most learned geometers of his time, and is reported to have written elements of this science, which were much esteemed, but are now lost. He appeared with honour in the list of those who attempted to solve the celebrated problem of the duplication of the cube, which at

this period began to be pursued with so much ardour, and which gave such an impulse to geometry. According to the traditions of authors, it is said the origin of this problem was on the following wise: Apollo having afflicted the Athenians with a dreadful pestilence in revenge for an affront which his priests attributed to the people, his oracle at Delphos was consulted on the best means of appeasing his wrath, and gave this answer:—"Double the altar." This altar being a perfect cube, could not be easily doubled without changing its form which it was necessary to preserve, and the problem was immediately proposed to all the mathematicians of Greece. They at first considered it easy, but they soon found out their mistake, as it completely baffled all their ingenuity. The same Chian Hippocrates discovered that if two geometrical mean proportionals could be found between the side of the given cube and the double of this side, the first of these proportionals would be the side of the cube required. The hopes of the mathematicians were for a short period revived by this discovery, and they imagined that the solution could be now geometrically obtained; but its difficulty was only disguised, and had merely changed its form. They found after all that the solution of the problem by the rule and compasses was insurmountable, and tired with the labour which they had exerted upon the research, allowed it to fall asleep till the discovery of the conic sections.

Meanwhile, philosophy had been multiplying her sects over Greece, with a strange mixture of truth and error, of fact and conjecture, from which geometry was altogether free. Socrates who flourished about 400 B. C., appears to have freed the human mind in a great measure from the trammels of the sophists and false philosophers who had hitherto dealt chiefly in speculation. He added nothing to science, if we except his method of exposing error, by means of a dialogue, wherein he brought his antagonist to confute himself, his whole attention being turned to the moral improvement of his countrymen. His chief object was to diffuse instruction among the whole body of the people, rather than to confine it to a few, an object which particularly distinguishes the philosophers of our own times, and certainly in no age nor country, has this ever been more happily effected than in this island. Plato the most eminent of the disciples of Socrates, soon rivalled his master in fame. He studied the doctrines of the Pythagoreans at Tarentum, and mathematics under Theodorus of Cyrene. Returning to Athens after his travels, still mourning for the death of the wisest of their sages, whom they had basely murdered, he founded the academic sect, and taught the youths of Greece under the shade of spreading planes, those sublime tenets of his mystical philosophy, which laid the foundation of his after renown. His first attempt was the duplication of the cube, which he could only solve mechanically; but he is said to have been the discoverer of the conic sections, and the inventor of the beautiful method of geometrical analysis, which became so powerful an instrument in directing the investigations of succeeding geometers, and in extending the boundaries of science. The five regular bodies formerly alluded to, were much cultivated by Plato and his followers, on account of some mystical properties which they supposed to belong to them; their history is well preserved in an ancient

Greek epigram, which with its translation we give from the edition of Euclid's Elements by Scarburgh:—

Σχῆματα πέντε Πλάτωνος, ἃ Πυθαγόρας σοφὸς ἔχει.
Πυθαγόρας σοφὸς ἔχει, Πλάτων δ' ἀείδει· ἰδιόεισι.
Εὐκλείδης· ἔσι τῷσι, κλειὸς περικαλλίει ἱππῶν·

The five Platonic bodies, so much fam'd,
Pythagoras first found, Plato explain'd;
Euclid on them, immortal glory gain'd.

The history of the ancient mechanical arts is very obscure. So little indeed is known, that the invention of arranging stones so as to form an arch, is attributed to Democritus the learned philosopher already mentioned. Seneca, however, who was a much later writer, thinks that so simple an invention must have been practised in much earlier ages; and a writer of modern times, Mr. King, has endeavoured to show that its general introduction in building was of much later date. Architecture, and other mechanical arts had nevertheless considerably advanced before this period, if it be true that Ctesiphon or Chersiphon who built the temple of Ephesus, was contemporary with Croesus and Thales. The era when bridges of stone were first erected is uncertain, and it is doubtful whether even the art of building wooden bridges was well understood at that period; for, according to Herodotus, it was commonly believed, that Thales avoided the necessity of procuring a passage over the Halys for the army of Croesus, by encamping them on its banks and cutting a channel for the river in their rear; yet the historian is of opinion that they crossed over it on bridges. Curtius speaks of a bridge of stone over the Euphrates at Babylon, which appears to have been built long before the time of Alexander; and it is scarcely probable that a stone bridge could have withstood the impulse of the waters of such a river, if it had been supported by columns only without arches. Pliny relates that Ctesiphon lowered his large blocks of stone, by placing them on heaps of sand bags, and letting out the sand by degrees; from which it appears that he must have been unacquainted with the use of the crane or any machine of a similar construction, otherwise he would never have employed such a tedious process. The invention of the crane, as well as the pulley and the screw, is attributed to Archytas of Tarentum, an illustrious genius who flourished about 400 B. C., and who is called by Horace, the "measurer of the earth and sea, and of the sands of the sea without number." His skill in mathematics seems to have been as great as it was in mechanics, and like our modern Ferguson, he appears to have applied the resources of the latter science to the demonstrations of the former; for this he incurred the censure of the cultivators of pure geometry in Greece, according to Plutarch, who says, "The first persons who cultivated the method of organic geometry, were of the school of Eudoxus and Archytas. These philosophers introduced elegance and variety into science, by illustrations derived from sensible objects, and made use of mechanical contrivances for expediting and familiarizing the solutions of problems, which if more mathematically treated, are complicated and difficult; each of them invented a method of determining in this manner the magnitude of two mean proportionals between two given lines by the assistance of certain curves and sections. Plato by no means approved of their mode of proceeding, and reprehended them severely, as giving up and perverting the most essential advantages of geometry,

and causing the science to revert from pure incorporeal forms, to the qualities of sensible bodies, subjected to narrow and servile restraints. It was for this reason that practical mechanics were separated from geometry, and were long neglected by philosophers, being considered as a department only of the art of war." This same Eudoxus who was a pupil of Archytas, and contemporary of Plato, was of Cnidus a city of Caria: he was, according to Cicero, the greatest astronomer that ever lived, and he is said by Proclus, to have composed elements of geometry, from which Euclid liberally borrowed. It is certain, however, that he taught that science with great success; he built an observatory in the above mentioned city, where he spent the latter part of his life in the delightful study of astronomy, and wrote a treatise on the subject, which though now lost, formed the foundation of the famous poem of Aratus, entitled *Phænomena*. This poem was so celebrated in ancient times, that three translations were made of it from the Greek into Latin, one by Cicero, one by Germanicus, and one by Avienus; and it is said that from it, Paul made the following quotation in his admirable sermon at Athens: "*Τὸν γὰρ καὶ γένος ἑστέον*,"—"for we are also his offspring." Eudoxus, for several years, published celestial ephemerides, which were highly esteemed and put up in public places, such as the Prytaneum at Athens. Vague mention is made by some authors, of a sphere of one Eudoxus, which they date 1200 or 1300 B. C., but no more is said of this ancient astronomer; hence it has been supposed with great probability, that the sphere of Eudoxus known among the Greeks was the work of the above mentioned philosopher, and consequently its antiquity remounts to no higher a period than the fourth century before the Christian era. The use of this sphere was to explain the celestial motions, and to show for the climate of Greece, the rising and setting of the sun and moon, and of the constellations, the new moons, and other phenomena. The philosophers of the Platonic school were remarkable for their addition to the study of geometry. The conic sections which had originated there, led to a series of fine discoveries in that science, and extended its boundaries so much, that the doctrine of Curves was denominated "The Higher Geometry." Aristæus who flourished about 380 B. C., composed five books on conics, which were highly spoken of by the ancients, but of them no fragments remain. Menechmus, a geometer of the same period, was a genius of the highest order. He invented two learned applications of these curves to the problem of the duplication of the cube which still continued to interest the Greek mathematicians. He saw from the nature of the conic sections and geometrical progressions, that if he constructed conformably to the conditions of the problem, two conic sections intersecting each other, the two ordinates corresponding to the point of intersection, would represent the two mean proportionals. On this consideration, he framed two solutions, in the first of which, he constructed two parabolas having a common vertex, with their axes perpendicular to each other, and for their respective parameters the side of the given cube and the double of that side; then the two ordinates, drawn to the point of intersection of the two curves, are the two mean proportionals required. He founded the second solution on the intersection of a parabola with an equilateral hyperbola, the former having for its parameter the side of the

given cube, or the double of that side; the vertex of this parabola being the centre, and its axis one of the asymptotes of the equilateral hyperbola; and the power of the hyperbola, the product of the side of the given cube into the double of that side; then, the ordinates of these two curves drawn to the points of their intersection, form the two mean proportionals required. Thus it appeared that if there were any means of describing the conic sections by one continued motion in as simple a manner as the circle is traced by a pair of compasses, the solutions of Menechmus would have possessed all the advantages of geometrical construction in that light in which it was viewed by the ancients. As no single instrument, however, can describe these curves in the manner required, the solutions were not deemed sufficiently practical to fall within the range of the common geometry, though being perfect in theory, they must be deemed a fine effort of inventive genius; nor does the easier solution, afterwards discovered, by means of the intersection of a circle and parabola detract from the merit of these first discoveries of this curious problem. These discoveries of Menechmus form a remarkable point in the history of pure science, as they were the source of the refined investigations respecting the *geometrical loci*, of which both ancient and modern mathematicians have made so many important applications. To the same origin may be traced the art of geometrical analysis, or method by which, considering a problem as solved, and treating the unknown quantities as known; we proceed from one step of reasoning to another, and from one conclusion to another, till we obtain an expression or result, which may be denominated the geometrical translation of all the conditions of the problem. This art differs from the algebraic mode of analysis, yet it derives great assistance from that mode in the hands of the moderns, who have in this respect a double advantage over the ancients. The famous problem of the trisection of an angle, which is very similar to that of the duplication of the cube, arose also in the Platonic school, and was found to be equally unattainable by the aid of elementary geometry. It was reduced however, to the very curious proposition, that if any chord of a circle be produced till the part without the circle be equal to the radius, and a straight line be drawn through the centre from the extremity of the line so produced, the convex arc of the circle intercepted between the chord and this diameter, will be one-third of the concave arc. The intersections of the conic sections were applied to the solution of this problem, in the same manner as they had been done to the duplication of the cube. According to the methods of modern analysis, each of these problems leads to any equation of the third order, with this difference, that the equation relative to the duplication of the cube has but one real root, while that relative to the trisection of an angle has three real roots. The ancient geometers were so buoyed up with the hope of attaining the resolution of these problems by means of the rule and compasses, that they continued to pursue the phantom in vain, and generated a mathematical epidemic, which has been transmitted from age to age, until it has reached our times. The admirers of the ancient geometry were particularly smitten with it, but it was uniformly relinquished by those who kept pace with the progress of science, when algebra began to be

applied to geometry. They who attack these problems now by the weapons of the ancients, show their ignorance of the advanced state of mathematical knowledge, and unless they combine with their investigations the resources of modern analysis, they may be safely transferred to the hospital of incurables. Dinostratus, another Platonist and contemporary with Menechmus, invented a curve which would have possessed the double advantage of giving the trisection or multiplication of an angle and the quadrature of the circle if it could have been described with one continued motion by the methods of elementary geometry. This curve is, from the latter problem, denominated the *quadratrix*, and is formed by the intersection of the radii of a quadrant with a ruler which is made to move uniformly parallel to one of the extreme radii of the quadrant, but is one of the mechanical curves, and does not rigorously fulfil either of the objects for which it was originally proposed.

While geometry was thus making rapid advances to perfection, the other sciences were far from retrograding. Aristotle the most comprehensive genius of antiquity, called the Stagyrte from the place of his birth, flourished about 360 B. C. He was the most illustrious disciple of his illustrious master Plato. As his celebrated pupil Alexander aimed at the universal conquest of the civilized and barbarian world, so he sought to embrace both the natural and moral, within the single grasp of his capacious mind. He founded the Peripatetic school at the Lyceum near Athens, and according to some authors, wrote four thousand volumes, of which scarcely twenty have reached our times. Certain it is, that no author, whether ancient or modern, has taken such a wide range of disquisition,—and has been so distinguished for the universality of his genius, marked as it was by soundness of judgment, precision of thought, and uncommon acuteness. The sphericity of the earth, an opinion of the earlier philosophers, was demonstrated by Aristotle, in the following clear manner, in his treatise, “*De Celo* :”—“In eclipses of the moon, the line that bounds the eclipsed path is always a curve; and as the moon is eclipsed by the shadow of the earth, it is certain that this appearance is caused by the circumference of the earth which is spherical. Indeed it is evident from the appearances of the stars that the earth is round. Its extent too cannot be very considerable; for if we travel ever so little either toward the north or south, the horizon manifestly varies in such a manner, that the stars over our heads are altered, not being the same to those who travel north, as to those who travel south.” He adds that, “those mathematicians who have attempted to determine the magnitude of the earth’s circumference, say that is four hundred thousand stadia.” There is reason to believe that Aristotle here speaks of the Pythagorean mathematicians, who considered the earth as a planet and supposed it to revolve round the sun or centre of the world, so as to produce the alternations of day and night; an opinion which he attempts to refute in the chapters preceding the above extract.

It is evident that he here speaks only as a historian, when he mentions the mensuration of the earth, and it is singular, that possessing such just views of the phenomena of astronomy, he should have erred respecting their causes. Yet this is no more than what many illustrious philosophers were guilty of, even after the fullest

knowledge of facts in several branches of philosophy; until Bacon arose to disperse the mists of the human mind, and to point out the true path to the sciences. Indeed no two geniuses that ever appeared in the world, could be more appositely placed in contrast than Aristotle and Bacon. The former reigned with the most uninterrupted and despotic sway over the empire of human knowledge; the latter, after a lapse of centuries, reduced that sway to nothing but an empty name. The one introduced a mode of reasoning which served only for the communication of truth; the other unfolded the true method of discovering it. The Stagyræ established a beautiful and imposing fabric on a foundation so unstable as to totter at the first breath of returning strength in the human mind; the English philosopher pointed out where that strength lay, and rendered himself immortal by the discovery. Aristotle's authority is, however, still great in the domain of letters, though his philosophical kingdom has departed from him. Even his Natural History, that elaborate work which he was enabled to write by the munificence of his ambitious pupil, must be deemed a wonderful production for the time when it was composed. He is esteemed by Professor Leslie as the founder of Comparative Anatomy; and according to Cuvier, a most competent judge, the divisions which he introduced are still the best that could be made. He was the first who distinguished the nerves from the tendons; he noticed the auditory and optic nerves of the mole; he traced the optic and olfactory nerves in fishes; and described with great accuracy the process of the incubation of eggs, and the development of the chick. His Meteorology abounds with fine remarks and just conclusions. His Mechanics seems to be among the least valuable of his works, containing very little truth worthy of notice, with not a few errors. Probably his ignorance of, or contempt for geometry, might have led him into mistakes; but, indeed, the most of his propositions are trifling, the form of the work consisting of answers to certain queries, and explanations of natural effects and of seeming paradoxes. A few instances will serve to give an idea of it: "Of a circular line which, without any breadth, has both convexity and concavity—How two things, the one moving the other, may move contrary ways at the same time—That two lines moved parallelwise in different directions, with velocities having always the same ratio, have their intersection always in the diameter of the parallelogram having its sides in the directions of the motions—On the affections and properties of scales and balances—On the cause of the power of the lever—Why oars are most effective in the middle of the ship—On the cause of the power of the rudder and sails—Why a stone is thrown farther from a sling than from the hand—On the wheel and axle, and tooth and pinion work—On the breaking of wood—On the roundness of pebbles—Of the pulley and statera—Of the toothdrawer and nutcracker—Of beds," &c. &c. The bare enumeration of these articles show to what extent mechanical knowledge had arrived in the age when this universal genius flourished, of whom and his followers, it may be said, in the words of Professor Leslie, that if the Peripatetics had cultivated geometrical analysis with the same ardour as the followers of Plato, they would infallibly have made great and successful progress in natural philosophy.

It is a remarkable fact, that the exact sciences flourished in Greece not only when her literature and fine arts existed in their greatest splendour, but continued to advance after the latter had evaporated in the political squabbles of the country. Poetry, eloquence, and sculpture soon began to decline after reaching their zenith, while all parts of the mathematics were rapidly extending their conquests. A short but brilliant period seems to have been allowed only in most countries, to original excellence in those arts which depend for their origin and existence on the powers of the Imagination. The exercise of this faculty seems, like the liberty of turbulent republics, to lead, after a few generations, to its slavery; while the reason, a better governed kingdom, goes on making acquisitions which are not only imperishable but perpetually accumulating. The science and literature of Athens, that once mistress of the intellectual world, were, by the misfortunes of Greece, transferred to the other countries bounded by the shores of the Mediterranean; and they were particularly cherished by Ptolemy, to whose lot Egypt fell, after the dismemberment of the vast and unwieldy empire of Alexander. The school of Alexandria founded by this prince in the magnificent edifice styled the Museum, became the wonder of the world, and produced a host of eminent men. These were invited from every country, liberally entertained at the public expense, and provided with all the necessary apparatus for carrying on their investigations on an extended scale. The munificence of the successors of the founder enriched it with a vast library, and a spacious and well furnished observatory. Here Aristillus and Timocharis, about 300 B. C., made an immense series of observations, as well on the position and number of the fixed stars, as on the motions of the planets; and these observations served afterwards as the basis of the Ptolemaic theory. Here also about the same period, Euclid, one of the brightest ornaments of the Alexandrian school, digested his immaculate "Elements of Geometry," and raised an imperishable monument to his fame. No book of science ever met with success comparable to his; it has been taught exclusively for nearly two thousand years in every mathematical school; and it has been translated and commented upon, in all languages—a certain proof of its excellence. Being so well known, it seems quite unnecessary to detail the particulars of such a work. Euclid appears, from some fragments that remain of his other works, to have been well versed in the theory of conic sections, then pretty far advanced. His *Data*, *Plane Loci*, and *Porisms*, sufficiently prove both the elegance of his mind and the extent of his genius. Nor will the works on Music, Astronomy, and Optics, commonly ascribed to Euclid, lessen his great merit, when we consider the early period at which they were written. The method of Exhaustions, that subtle instrument of discovery in geometry which contained within it the germ of the modern invention of Fluxions, was finely exemplified by Euclid, and enabled his successors to discover a host of shining truths. Thus we see those secret ties which connect the mathematicians and philosophers of all times, and form so many irrefragable links between the sciences. At length arose in the island of Sicily, the most inventive genius of antiquity, who gave an impulse to the sciences which has rendered his name immortal, and procured him

among the moderns the title of the Prince of ancient mathematicians. Archimedes of Syracuse is indeed a name known to all the world; and the extent of his discoveries justify all the praise that has been heaped upon his memory. According to some authors, he flourished about 290 B. C.; he applied the method of discovering geometrical truths above mentioned, to the quadrature of the circle; and although he failed in attaining the solution of a problem which is now known to be impossible, yet he was the first who discovered the ratio of the circumference of a circle to its diameter with any degree of accuracy. Besides his work on the Dimension of the Circle, there remain his Treatises on the Sphere and Cylinder, on Conoids and Spheroids, on the Quadrature of the Parabola, on Equiponderants or Centres of Gravity, on Bodies floating on a Fluid, and his *Arenarius* or numbering of the Sand, with his *Lemmata*. In the Treatise on the Sphere and Cylinder, he shows that the superficies of the sphere is equal to the convex superficies of the circumscribed cylinder, or which is the same thing, to the quadruple of one of its great circles; that the superficies of a spherical segment is equal to the corresponding cylindrical superficies, or to that of the circle which has for its radius the chord drawn from the summit to a point in the circumference of the base; and that the solidity of the sphere is two-thirds of that of the cylinder, thus connecting the cylinder, the sphere, and the cone together by a beautiful chain, of which the first link had been given by Euclid in the 10th proposition of his 12th book, where he shows "that the cone is one-third of a cylinder of the same base and altitude." Hence the ratio of the cone, the sphere, and the cylinder may be represented by the numbers 1, 2, and 3. The treatise on Conoids contains several properties of solids produced by the revolution of the conic sections round their axes. Archimedes compares these solids with each other, and determines their ratios to the cylinder and cone of the same base and altitude. He also demonstrates that the solidity of the paraboloid is only half that of the circumscribed cylinder. In his work on the Quadrature of the Parabola he proves by two equally ingenious methods, that the area of that figure is two-thirds of that of its circumscribed rectangle; this was the first instance of an absolute and rigorous quadrature of a space contained between straight lines and a curve. The geometry of the treatise on Spirals is very profound; in it, he compares the length of these curves with arcs of corresponding circles, and the spaces they include, with circular spaces; and he shows the mode of drawing tangents and perpendiculars to such curves. These researches, rendered so easy by the invention of Newton, were extremely difficult to the geometers of antiquity; and we need not wonder at the complexity and length of their demonstrations, when we consider the unwieldiness of the instrument they employed. Indeed we ought to admire that force of intellect, which enabled them to acquire and to retain such a great number of propositions, and still preserve the chain of truth unbroken and entire. The discoveries of Archimedes in mechanical science were no less remarkable than those which he made in geometry; indeed, it may be said that the former first took its shape under his plastic hand. Practical mechanics, we have seen, must have been known before his time; other wise, how could the ancients have raised those amazing piles of architecture which are so famous in

history? He was the first, however, who attempted, with any degree of success, to reduce its principles to demonstration. In his work on Equiponderants, he considers the nature of a balance supported on a fulcrum, and shows that if one of the arms be increased, the weight applied to it must be diminished, so that the weights at the two ends must be reciprocally proportional to the lengths of the arms, to produce an equilibrium. By extending this principle to all bodies, he arrived at the notion of the centre of general pressure, which is now denominated the centre of gravity. He applied this theory to particular instances; and determined the place of the centre of gravity in the parallelogram, the triangle, the trapezium, the area of the parabola, the parabolic trapezium, and other figures. To him is likewise attributed the theory of the inclined plane, the pulley, and the screw. He invented a number of curious compound machines, of which it is to be lamented that the mere names only remain. We have lost his own account of the method he employed to discover the mixture of gold and silver in Hiero's crown, about which every body knows so well; and his description of the cochleon or engine for drawing water out of places where it is stagnated, which is commonly known under the name of Archimedes' screw. Athenæus, speaking of the prodigious ship built by the order of Hiero, says that Archimedes invented the cochleon, to enable one man to drain the hold of this vessel, notwithstanding its depth. According to Diodorus Siculus, he invented this machine when on his travels in Egypt, and it was there employed in draining marshes, rivers, lakes, &c.; no mention is made of it, however, by Vitruvius, a historian of the same age, and an admirer of our philosopher; some commentators even deny him the honour of this invention, and declare that it must have been anciently in use in Egypt. Be these things as they may, his fame does not rest on this invention alone; for it is not so difficult to ascertain how few, as it is to determine how many, his discoveries were. Among those mechanical inventions which are lost, are reckoned the Helix, by means of which Athenæus informs us, he launched Hiero's great ship; the Trispaston, which, according to Tzetzes and Oribasius, could draw the most enormous loads; the machines which, according to Polybius, Livy, and Plutarch, he employed in the defence of Syracuse against Marcellus, consisting of Ballistæ, Tormenta, Catapultæ, Sagittari, Scorpions, Cranes, &c.; the Burning-glasses with which he set fire to the Roman galleys; his Pneumatic and Hydrostatic Engines, concerning which he wrote some books, according to Tzetzes, Pappus, and Tertullian; his Sphere, which exhibited the celestial motions, and probably many other inventions. The sphere is said to have been made of glass, of a most wonderful contrivance and workmanship; Claudian has an epigram on this invention, of which the following translation has been given:—

"When in a glass's narrow space confin'd,
Jove saw the fabric of th' Almighty mind,
He smil'd, and said,—Can mortals' art alone,
Our Heavenly labours mimic with their own?
The Syracusan's brittle work contains
Th' eternal law, that through all nature reigns.
Fram'd by his art, see stars unnumber'd burn,
And in their courses rolling orbs return:
His sun through various signs describes the year;
And every month his mimic moons appear.

Our rival's laws his little planets bind
And rule their motions with a human mind.
Salmonous could our thunder imitate,
But Archimedes can a world create!"

The story of the boast of Archimedes, or that if he had a place to stand on he could move the earth, is well known, and has given rise to many a curious calculation; it is nevertheless but a simple application of the principles of the equilibrium of the lever. Had Archimedes, says Bossut, been no more than the first geometrician of his age, with this great but indefinite claim to glory, he might have lived and died in obscurity; but the machine he invented acquired him the greatest fame. This is the polar star of the admiration of the vulgar, that is, of the generality of mankind. Incapable of appreciating the speculations of genius, the multitude admires the man who strikes the senses and imagination by new and extraordinary spectacles. Archimedes was far from attaching the same value to his mechanical inventions. On this subject we may quote the words of Plutarch in his *Life of Marcellus*, where, after having related that Appius, a Roman engineer, at the siege of Syracuse, had brought several large machines against the walls of the city, to destroy them, he proceeds thus:—"Archimedes, armed with his own inventions, only made light of the splendour of the Roman preparations and of the glory of the name of Marcellus. And these were inventions that he even considered as of subordinate value, as geometrical playthings which had been the amusement of his leisure hours. It was king Hiero that first induced him to transfer a portion of his science from intellectual to material objects, and to condescend in some degree to the comprehension of the multitude, by giving a sensible form to those truths, which in their abstract state are discoverable only to the reasoning faculty. Archimedes had such depth of intellect and such sublimity of mind, that notwithstanding he obtained by these inventions the credit and glory of an intelligence rather divine than human, he thought it unworthy of him to leave any written treatise on the subject, considering practical mechanics, and every art that is concerned in satisfying the wants of life, as ignoble and sordid; and resting all his hopes of fame on those works in which the magnificent and the elegant are exhibited, uncontaminated by the imperfections of the material world; works that are comparable to nothing else that the mind of man has produced; in which the subject only contends with the mode of treating it, the magnitude and beauty of the one being rivalled by the accuracy and vigour of the other. It is impossible that propositions more difficult and important should be deduced from simpler and purer elements. Some attribute this to his natural genius, others to his indefatigable application, which has given to every thing that he has attempted the appearance of being performed with ease. For we might ourselves search in vain for a demon-

stration of his propositions; but so smooth and direct is the way by which he leads us, that when we have once passed it, we fancy that we could readily have found it without assistance. We may therefore easily give credit to what is said of him, that being as it were fascinated by this domestic Syren that bore him company, he often neglected his food and clothing; that sometimes when brought by compulsion to the baths, he used to draw his figures in the ashes of the fire-places, and to make his calculations upon the cosmetics employed by the attendants, deriving, like a true votary of the muses, every pleasure from an intellectual origin. Among all his beautiful discoveries he is said to have chosen that of the proportion of the sphere and cylinder for his sepulchral honours; requesting of his friends that they would place on his tomb a cylinder containing a sphere, and inscribe on it the ratio he had determined." "The judgment," says Bossut, "which Archimedes passed on the geometry of his time, he would equally have passed on the great discoveries of the moderns in geometry and rational mechanics. All knowledge of this kind incontestably occupies the first rank in the domains of science. We certainly must not place practical mechanics on a level with it; since a man, who was at the same time equally great as a geometrician and a mechanician, forbids us in such a peremptory manner, yet they sometimes require much sagacity and research; and assuredly a mechanician of the first order is less common, and deserves higher consideration, than a geometrician merely skilled in the science, but destitute of the talent of invention."

We have given this full account of the opinions of Plutarch and Bossut regarding the inventions of Archimedes, who, according to them, possessed the same opinions, (but of this we may be permitted to doubt, especially as we have nothing of his own testimony on the matter,) because we consider them equally unfounded and injurious, and as such, deserving of exposure. It is, thanks to the spirit of the nineteenth century, the glory of the philosophers of the present day to value knowledge only in proportion as it is useful to man, and to despise that vain and futile desire of speculation so apt to be engendered by the mere study of abstract science. King Hiero, if Plutarch's gossiping story be true, possessed a juster notion of the true object and end of science than either Archimedes or any of his panegyrists; but we shall not do the philosopher the injustice to suppose he was a whit behind his royal kinsman in properly estimating the utility of applying his knowledge, however fine, to the wants and the necessities of man. Indeed, what could be more glorious in any of his inventions than its use in defending his native city from the rude attacks of an enemy, and in resisting for three whole years the united force of the Roman legions and all the military skill of their famous general?

OF GEOGRAPHY.¹

SECT. I.

Of the most distinguished Geographers of antiquity.

CONQUESTS and commerce have aggrandized geography, and still contribute to its perfection. Homer, in his poems upon the Trojan war and the voyages of Ulysses, has mentioned a great number of nations and countries, with particular circumstances relating to many places. There appears so much knowledge of this kind in that great poet, that Strabo² considered him in some sort as the first and most ancient of geographers.

It is certain that geography has been cultivated from the earliest times; and besides the geographical authors come down to us, we find many others cited by them, whose works time has not spared. The art of representing the earth, or some particular region of it, upon geographical tables and maps, is even very ancient.³ Anaximander, the disciple of Thales, who lived above five hundred years before Christ, had composed works of this kind, as we have observed above.

Alexander's expedition, who extended his conquests as far as the frontiers of Scythia, and into India, opened to the Greeks a positive knowledge of many countries very remote from their own. That conqueror had two engineers, Diognetus and Baton, in his service, who were ordered to measure his marches. Pliny and Strabo⁴ have preserved those measures; and Arrian⁵ has transmitted down to us the particulars of the navigation of Nearchus and Onesicritus, who sailed back with Alexander's fleet from the mouths of the Indus into those of the Tigris and Euphrates. The Greeks having reduced Tyre and Sidon, had it in their power

to inform themselves particularly of all the places to which the Phœnicians traded by sea, and their commerce extended as far as the Atlantic Ocean. Alexander's successors in the East extended their dominions and knowledge still farther than him, and even to the mouths of the Ganges. Ptolemy Evergetes carried his into Abyssinia, as the inscription of the throne of Adulis, according to Cosmas the hermit, proves.⁶ About the same time Eratosthenes, the librarian of Alexandria, endeavoured to measure the earth, by comparing the distance between Alexandria and Syene, a town situated under the tropic of Cancer, with the difference of latitude of those places, which he concluded from the meridian shadow of a gnomon erected at Alexandria at the summer solstice.

The Romans, having made themselves masters of the world, and united the East and West under the same power, it is not to be doubted, but geography must have derived great advantages from it. It is easy to perceive, that most of the completest geographical works were compiled during the Roman emperors. The great roads of the empire measured in all their extent, might have contributed much to the improvement of geography; and the Roman Itineraries, though often altered and incorrect, are still of great service in composing some maps, and in the inquiries necessary to the knowledge of the ancient geography. Antoninus's *Itinerary*, as it is commonly called, because supposed to have been compiled in his reign, is ascribed by the learned to the cosmographer Æthicus. We have also a kind of *Table* or oblong *Map*, which is called the *Theodosian Table*, from its being conjectured to have been composed about the time of Theodosius. The name of *Peutinger* is also given to this table, which is that of a considerable citizen of Augsburg in Germany, in whose library it was found, and whence it was sent to the famous Ortelius, the greatest geographer of his time.

Though geography be but a very short part

¹ The reader no doubt has observed, from all that has been said of astronomy, the essential relation of that science to Geography and Navigation. M. D'Anville, Geographer Royal, with whom I am particularly intimate, has been pleased to impart memoirs of geography to me, of which I have made great use.—*Rollin*.

² Strab. l. i. p. 2. ³ Laert. l. ii. ⁴ Plin. l. vi. c. 17.
⁵ Strab. l. xi. p. 514. ⁶ Arrian lib. rec. Indic.

⁶ Thevenot's Travels, vol. I.

of Pliny's natural history, he however often gives us a detail of considerable extent. He usually follows the plan laid down for him by Pomponius Mela, a less circumstantial, but elegant, author.

Strabo and Ptolemy held the first rank among the ancient geographers, and dispute it with each other. Geography has more extent, and takes in a greater part of the earth in Ptolemy; whilst it seems equally circumstantial every where: but it is that extent itself that renders it the more suspected, it not being easy for it to be every where exact and correct. Strabo relates a great part of what he writes upon the evidences of his own eyes, having made many voyages for the greater certainty of his accounts; and is very succinct upon what he knows only from the reports of others. His geography is adorned with many historical facts and discussions. He affects every where to remark in respect to each place and country the great men they have produced, and that do them honour. Strabo is a philosopher as well as a geographer; and good sense, solidity of judgment, and accuracy, display themselves throughout his whole work.

Ptolemy having disposed his geography in general by longitudes and latitudes, the only method of attaining any certainty in it, Agathodamon, his countryman, and of Alexandria as well as himself, reduced the whole into geographical charts or maps.

The authors, of whom I have now spoken, are in a manner the principal sources, from which the knowledge of the ancient geography is to be acquired. And if the particular description of the principal countries of Greece by Pausanias be added to it, with some lesser works, that chiefly consist of brief descriptions of sea coasts, among others those of the Euxine and Erythrean seas by Arrian, and the account of cities compiled from the Greek authors by Stephanus Byzantinus, we have almost all that remains of the geographical works of antiquity.

It is not to be imagined, that the ancients, whom I have cited, had no thoughts of using the helps astronomy was capable of affording geography. They observed the difference of the latitudes of places by the length of meridian shadows at the summer solstice. They determined also that difference from the observation of the length of the longest days in each place. It was well known by the ancients, that by comparing the time of the observation of an eclipse of the moon in places situated under different meridians, the difference of the longitudes of those places might be known. But, if the ancients understood the theory of these different observations, it must be allowed, that the means they employed in it were not capable of leading them to a certain degree of exactness,

to which the moderns only attained by the help of great telescopes, and the perfection of clocks. We cannot help perceiving the want of exactness in the observations of the ancients, when we consider, that Ptolemy, all-great cosmographer as he was, and though an Alexandrian, was mistaken about the fifth of a degree in the latitude of the city of Alexandria, which was observed in the last century, by the order of the king of France, and the application of the Royal Academy of Sciences.

But, though there is reason to conclude, that the art of making geographical maps was very far from being carried among the ancients to that degree of perfection it is in our days, and though we may believe, that even in the time of the Romans, the use of those maps was not so common as at present; an ancient monument of our Gaul itself informs us, that young persons were taught geography by the inspection of maps. That monument is an oratorical discourse spoken at Autun in the reign of Constantius, wherein the rhetorician Eumenes expressly tells us, that in the porch of the public school of that city, young students had recourse to a representation of the disposition of all the lands and seas of the earth, in which the courses of the rivers and the windings of coasts were particularly described. "*Videat in illis porticibus Juventus et quotidie spectet omnes terras, et cuncta maria, et quicquid invictissimi Principes, urbium, gentium, nationum aut pietate restituant, aut virtute devincunt aut terrore. Si quidem illic, ut ipsi vidisti, credo instruendæ pueritiæ causa, quo manifestius oculis discerentur quæ difficilior percipiuntur auditu, omnium, cum nominibus suis, locorum situs, spatia, intervalla descripta sunt, quicquid ubique fluminum oritur et conditur, quacumque se littorum sinus flectunt, quo vel ambitu cingit Orbem, vel impetu irrupit Oceanus.*"¹

SECT. II.

Lands known to the Ancients.

To know what part of the surface of the earth was known to the ancients, is of some use.

On the side of the West which we inhabit, the Atlantic Ocean and the British Isles limited the knowledge of the ancients. The Fortunate Islands, now called the Canaries, seemed to them the remotest part of the ocean between the south and the west; and it was for that reason Ptolemy reckoned the longitude of the meridian from those islands; in which he has been followed by many eastern and Mahometan geographers, and even by the French and most of the moderns.

¹ Inter. Vet. Panegy.

The Greeks had some slight knowledge of Hibernia, the most western of the British Islands, even before the Romans had conquered Great Britain.¹ The ancients had but very imperfect notions of the northern countries as far as the Hyperborean or Icy Sea. Though Scandinavia was known, that country and some others of the same continent, were taken for great islands. It is hard to determine positively what place the ancients understood by *ultima Thule*.² Many take it for Iceland. But Procopius seems to make it a part of the continent of Scandinavia. It is certain that the knowledge, which the ancients had of Sarmatia and Scythia, was very far from extending to the sea, which now seems to bound Russia and great Tartary on the north and east sides. The discoveries of the ancients went no farther than the Rhipæan mountains, the chain of which actually divides Russia in Europe from Siberia.

It is evident that the ancients had no great knowledge of the northern part of Asia, when we consider that most of their authors, as Strabo, Mela, Pliny,³ imagined that the Caspian Sea was a gulf of the Hyperborean Ocean, whence it issued by a long canal. On the side of the East, the ancients seem to have known only the western frontier of China. Ptolemy seems to have had a glimpse of some part of the southern coast of China, but a very imperfect one. The great islands of Asia, especially those of Japan, were unknown to the ancients. Only the famous Taprobana is to be excepted, the discovery of which was a consequence of Alexander's expedition into India, as Pliny informs us.

It remains for me to speak of the southernmost part of Africa.⁴ Though many have supposed that in a voyage of extraordinary length they had sailed round this part of the world, Ptolemy however seems to insinuate, that it had escaped the knowledge of the ancients. Every body knows that it lies almost entirely within the torrid zone, which most of the ancients believed uninhabitable near the Equinoctial Line; for which reason Strabo goes very little farther than Meroë in Ethiopia. Ptolemy, however, and some others, have carried their knowledge along the eastern coast of Africa as far as the Equator, and even to the island of Madagascar, which he seems to intend by the name of *Menuthias*.⁵

It was reserved for the voyages undertaken by the Portuguese in the fifteenth century, in order to go to India by sea, to discover the greater part of the coasts of Africa upon the Atlantic Ocean, and especially the passage by the south

of the most extreme cape of Africa. That passage having been discovered, several European nations, led by the hopes of a rich traffic, ran over the Indian Sea that washes the coasts of Asia, discovered all the islands in it, and penetrated as far as Japan. The conquests and settlement of the Russians in the northern part of Asia have completed our knowledge of that part of the world. To conclude, every body knows, that, about the end of the fifteenth century, a new world, situated on the west in respect to ours beyond the Atlantic ocean, was discovered by Christopher Columbus under the auspices of the crown of Castile.

SECT. III.

Wherein the Modern Geographers have excelled the Ancient.

It would be blindness, and shutting one's eyes against demonstration, not to admit that the modern geography abundantly surpasses the ancient. It is well known that the measures of the earth must be sought in the heavens, and that geography depends upon astronomical observations. Now who can doubt, that astronomy has not made an extraordinary progress in later times? The invention of telescopes only, which is of sufficiently recent date, has infinitely contributed to it; and that invention itself has been highly improved in no great number of years. It is therefore no wonder that the ancients, with all the genius and penetration we are willing to allow them, were not able to attain to the same degree of knowledge, as they were not assisted in their inquiries by the same aids.

Geography is still far from having received its final perfection. Practical sciences make the least progress. Two or three great geniuses suffice for carrying theories a great way in a short time; but practice goes on with a slower pace, because it depends upon a greater number of hands, of which even far the greater part are but meanly skilful. Geography, which would require an infinite number of exact operations, is imperfect in proportion both to that number and the accuracy they would require; and we may justly suppose that the description of the terrestrial globe, though it begins to be rectified a little, is still very confused, and far from a true likeness.

It would be of small consequence to mention the faults of the ancient and Ptolemaic maps, in which the Mediterranean is made to extend a good fourth more in longitude than it really does. The question here is the modern maps, which, though generally the better the more modern they are, have still occasion for abundance of corrections.

Monsieur Sanson has always been considered

¹ Arist. de Mundo, c. 3.

² Virg. Georg. I. Procop. de Bell. Goth. I. li. c. 15.

³ Strab. I. li. p. 121. Mel. I. iii. Plin. I. vi. c. 13.

⁴ Plin. I. vi. c. 22.

⁵ Arriani et Marciani Hæcæli Peripl.

as a very good geographer, and his maps have always been highly esteemed. Monsieur Delisle has however differed from them very often in his. And this is not to be imagined, as it is usually called, jealousy of profession. Since Monsieur Sanson's time, the earth is exceedingly changed; that is to say, more accurate, and a greater number of astronomical observations have greatly reformed geography. The same, no doubt, will happen to the maps of Monsieur Delisle; and we ought to wish so for the good of the public.

The only method for making good geographical maps would be to have the position of every place from astronomical observations. But we are exceedingly far from having all these positions in this manner, and can hardly ever hope to have them. To supply this want, the itinerary distances of one place from another are used, as found set down in authors: and it is a great happiness to find them there with any exactness, and without manifest contradiction, or considerable difficulties. Hence, when our most skilful geographers were to make a map of the Roman countries, and particularly of Italy, as they had very few astronomical observations, they made the itinerary distances of places, as they found them in the books of the ancients, their rule for their position. The positions of many places have been since taken by astronomical observations. Monsieur Delisle made use of them for correcting the maps of Italy and the neighbouring countries; and he found that they not only became very different from what they were before, but that the places agreed exactly enough in respect to the distances given them by the ancients: so that it is to be presumed, that in following them literally, good geographical maps might be made of the countries well known to them.

There is reason to be surprised at this great conformity of positions found by astronomical observations with those taken from the itinerary distances as set down by the ancients. For it is certain, that the situation of places taken from our itinerary distances are often false, and much so too. But Monsieur Delisle observes, that the Romans had advantages in this respect, which we have not. Their taste for the public utility, and even magnificence (for they embellished all they conquered), had occasioned their making

great roads throughout all Italy, of which Rome was the centre, and which went to all the principal cities as far as the two seas. They made the like ways in many provinces of the empire, of which remains, admirable for their construction and solidity, exist to this day. These ways ran in a right line, without quitting it either on account of mountains or marshes. The marshes were drained, and the mountains cut through. Stones were placed from mile to mile with their *numero* upon them. This rectilinear extent, and these divisions into parts sufficiently small in respect to the whole length, rendered the itinerary measures very exact. This exactness of the measures of the ancients was well proved by an experiment made by Monsieur Cassini. The measure of the distance from Narbonne to Nismes had been included in the work of the meridian. That distance was sixty-seven thousand five hundred *toises* or fathoms of Paris. Strabo had also given the distance of these two cities, which he makes eighty-eight miles. Whence it is easy to conclude, that an ancient mile was seven hundred sixty-seven *toises* of Paris. Besides, as the mile is known to have been five thousand feet, we also find that the ancient foot was eleven inches and 1-25th of the Paris foot. The measure, in consequence, must be equal to the ancient distance, and have preserved itself without change during so long a space of time.

Monsieur Delisle has given us a map, wherein Italy and Greece are represented in two different manners: the one according to the best modern geographers, the other according to astronomical observations for the places where they were to be had, and for the rest according to the measures of ancient authors. The difference between these two representations would perhaps seem incredible. In the latter, Lombardy is very much shortened from south to north, Great Greece lengthened, the sea that divides Greece and Italy made narrower, as well as that between Italy and Africa, and Greece much lessened.

These last remarks, which are all taken from the Memoirs of the Academy of Sciences, lengthen this brief head a little, but I conceived them worthy of the reader's curiosity.

SUPPLEMENT BY THE EDITOR.

THE Greek word *Geographie* literally implies no more than a bare description of the earth, and may be defined, a description of the whole earth as far as it is known to us. It may be subdivided into astronomical, physical, and political geography. Concerning the first, the ancients had no fixed system till the era of Ptolemy, who was the first who treated it in a scientific manner. Respecting the two latter, they became successively known, by means of commerce and conquest.

As geometry is the foundation both of astronomical and physical geography, the invention of geographical science has been therefore generally attributed to the Egyptians. Whether this inference be legitimate or false respecting that famed people it is impossible to say, as no documents of their geographical knowledge have reached us. It is quite possible to conceive that their geometrical science might reach no farther than land surveying, making of canals, taking levels, erecting temples, pyramids, and palaces, without supposing that they applied it to the purposes of astronomical and physical geography.

The Egyptians, however renowned in antiquity as a learned and scientific people, were chiefly employed in agricultural pursuits, and for a long time had a decided aversion to maritime commerce. Although their country was favourably situated both for navigation and commercial enterprise, they were by no means disposed to cultivate these advantages, and had no curiosity to visit distant climes, whether by sea or land. They were contented to stay at home and receive the visits of foreign traders, and exchange on their own shores, their own productions whether of agriculture or manufactures, with those of foreign nations. The fact is, they were an insulated people, whose maxim it long continued to be, *never to leave their own country*. As little were they inclined to make foreign conquests. It consequently follows, that if foreign commerce and distant warlike expeditions have contributed, and still contribute, as our author pertinently remarks, to the advancement of geographical knowledge, the Egyptians could not have much. We are told indeed, by Apollonius Rhodius in his *Argonautics*, that an Egyptian conqueror had engraved his route to Oia, the capital of Colchos, on tablets, and left them there as a proof of his conquests, and that on these tables, (maps) the whole extent of the roads, and the limits of the land and sea were marked out. "Tradition," says Gibbon, "has affirmed with some colour of reason, that Egypt planted on the Phasis a learned and polite colony, which manufactured linen, built navies, and

invented geographical maps." The inference deduced from this is, that if Sesostris left such engraved maps in a place so remote from Egypt, such maps were much more numerous in Egypt itself. If the premises be true, the inference is plainly legitimate. But the whole authority for the truth of the premises depends on a Greek poet who flourished more than a thousand years after the supposed date of the Argonautic expedition, and it is passing strange, that with the help of such maps, the Argonauts should not have found their way home, but lost their road, as all authors agree, or pursued one on their return, not only different from that by which they came, but different from that by which Sesostris himself marched to the same place. If they had been stone or brass tablets, which Sesostris left, they might have proved of some use to the Argonauts, as they might have taken them with them, but if engraved on columns, they could have been but of little use to them, unless they had transported the columns themselves. The whole story of Sesostris is so blended with fable, as to render it unworthy of credit. That an Egyptian prince should have conquered all the intervening nations, from the Nile to the foot of Mount Caucasus, and engraved a map or maps of his marches and conquests on columns in the capital of Colchos, at an era almost as ancient as the Exodus from the land of Egypt, is too incredible to admit belief, and must therefore be dismissed as one of those poetical fictions which the Greeks of a later age contrived to astonish and amuse their vain and credulous countrymen.

Respecting the Phenicians, as they were the earliest navigators of antiquity, and as it were encompassed sea and land in quest of gain, their knowledge of geography, especially of hydrography, must have been considerable, and far beyond that of any of the nations of antiquity, whose existence was contemporaneous with their own. But no distinct accounts of their early voyages and discoveries have been preserved, and as they were a people entirely addicted to the arts of gain, they kept their discoveries a profound secret, in order to preserve the monopoly of commerce entirely to themselves. If Bochart, that learned and ingenious Orientalist, may be credited, their knowledge of the surface of the globe must have been great, as he has not only traced their progress throughout the whole maritime coasts of the Mediterranean and Euxine Seas, but also through those of the Baltic Sea and German Ocean. He has also traced their progress beyond the Pillars of Hercules, along the western coast of Spain, the Bay of Biscay, and as

far to the N. W., as the coast of Cornwall. In like manner he has traced their progress along the S. W. coast of Africa. The amber of Prussia, the silver of Spain, the tin of Britain, the gold of Ophir, the spices of Arabia, the linen of Egypt, the slaves of Caucasus, the ivory of Africa, the copper of Armenia, and the horses of Cappadocia centred in their emporium. But although their knowledge of maritime geography must have been extensive, although they also enjoyed an extensive inland commerce and carrying trade, they did not publish their voyages and travels, as the Greeks and Romans did in later times, and as is done in modern days, but kept their knowledge to themselves, so that posterity have little to thank them for, so far as respects geographical science. They made a monopoly of their geography as well as of their commerce. It is to the curious and scientific Greeks, that geography is indebted for its successive improvements.

The Argonautic expedition, though blended with much that is fabulous, is generally considered to be the commencement of genuine Greek history, of maritime enterprise and geographical discovery. As this voyage has been already discussed in the article upon ancient commerce, we shall only add the remark of Dr. Vincent on the authenticity of this expedition. "Whatever difficulties may occur in the return of the Argonauts, their voyage to Colchos is consistent, it contains more real geography than has yet been discovered in any record of the *Bramins* or the *Zendevesta*, and is truth itself, both geographical and historical, when compared with the portentous voyage of *Ram to Ceylon*."

The geographical descriptions of *Homer* in the *Iliad* and *Odyssey*, form the next epoch of geographical knowledge. The western coast of Asia Minor is minutely described. The isles of the Archipelago and the Eastern basin of the Mediterranean, along with the coasts of Phenicia and Egypt, were fully within the compass of his knowledge. The inhabitants of the latter are described as inhabiting the river Egyptus, and as famed for their skill in medicine. The renowned Thebes, whose multiplied and stupendous ruins still continue to strike travellers of every clime and of every description with astonishment, admiration, awe, and delight, is graphically described in highly poetical language. To the W. of Egypt he places Lybia, where he says the lambs are born with horns, and the sheep bring forth three times a year. To the south he places Africa and Ethiopia: into this latter he conducts Neptune, in the *Odyssey*. What Ethiopians he means is impossible to determine, but probably he uses the term as a generic expression for all those who lived on the shores of the Southern Ocean from east to west. To the north he describes the Hyperboreans, as living in the same manner as the Scythians and as the modern Tartars still do. To the east and the west he mentions no country, but speaks of the sun frequently as rising from and setting in the ocean, which can bear no other meaning than that the Asiatic continent on the east, and the European on the west, are bounded by the ocean. According to his geography the earth was begun on all sides by the watery element, and Greece was the centre of the world. Eastward of *Ionis*, his geographical notices extend no farther than the *Paphlagonians* and *Halizonians*. Though his account of Greece is minute and circumstantial, yet his description of its western coasts, north of *Etolia*, are confused and obscure. Sicily was only known to him as the land of wonders and

fables, and the habitation of the one-eyed race, the Cyclops. His *Elysium* is the coast of *Andalusia*, where yellow *Rhadamanthus* reigned. But he has so circumscribed the Mediterranean on the western side, that the straits which separate Italy from Sicily, seem to have been its western limits. His *Lotophagi* inhabited the coast of *Libya*, between the Greater and Lesser *Syrtis*. To the N. and N. E. of Greece he mentions the *Thracians*, *Cimmerians*, and merely hints at *Colchos* and the *Euxine*. His knowledge of inland geography seems to be very confined; and as his geographical descriptions seem to have been chiefly maritime, his knowledge must have been principally procured from the *Phenicians*. By staying in Greece and making short voyages among the islands, or even down to Egypt, he could never learn that the earth was surrounded by the ocean, that the sun rises and sets in the ocean, that the ends of the earth are upon the ocean, and that *Ethiopians* the last of men dwell upon the ocean. These things he could only learn from a commercial people, the *Phenicians*, who alone could be supposed at that time to know the limits of the habitable world, and relate them to a curious and inquisitive person. These maritime traders might tell him, that wherever they came, the ocean was the general boundary. There is no mention made of *Babylon* or *Nineveh* in all his poems, which he surely would never have omitted to do had he known any thing of their wealth or magnitude. "*Homer*," says *Strabo*, "had no knowledge of the *Syrian*, (*Assyrian*) nor of the *Median* empire. For he who names the *Egyptian Thebes*, and celebrates the wealth of it and of *Phenicia*, would never have passed over in silence the grandeur of *Babylon* or of *Ninus* (*Nineveh*) and *Ecbatana*, had he known any thing of these kingdoms." With *Strabo's* good leave, however, it is a question with me if these empires then existed, and how in that case could *Homer* know them. It is past doubt with me that the *Median* empire did not exist for several centuries posterior to the *Trojan* war, and as for *Ecbatana*, if it really then existed at all, it was a city of no political importance till the sixth century before Christ. Whatever countries *Homer* personally visited, as Greece and the north-east coast of the Mediterranean, in these he names all the towns and rivers; describes their situations and their soils, one country is rocky and mountainous, another fertile and plain, one is dry and sandy, another moist and verdant. This is productive of sheep, that abounds with horses, a third swarms with pigeons, and a fourth is blessed with beautiful women. The reader has just to consult the second book of the *Iliad*, where he will find all these and other qualities predicated by *Homer* in his detailed topographical account of the various districts of Greece, and the adjoining shores of the *Hellespont*, in his catalogue of the forces on both sides assembled in the plain of *Ilium*. These accounts have been all confirmed by succeeding geographers.

We have no further lights respecting the geographical knowledge of the Greeks, till the days of *Herodotus*; all their previous acquaintance with the habitable world being gathered solely from short, vague, and imperfect narrations scattered throughout a great number of authors. It had never been imbibed by any writer. *Herodotus* has been justly denominated the Father of History. He may with equal justice be styled the Father of Geography. His history furnishes us with the earliest known system of

geography as far as it goes.¹ Since his book contains all the geographical knowledge of his own times, it may be proper to show the sources of his information. These were his own travels, and what he gleaned from the oral narrations and journals of other travellers. He was induced to travel at an early period of his life, by the oppressive tyranny of Lygdamis, over the inhabitants of Halicarnassus his native city. We must suppose his circumstances to have been such as enabled him to travel, as from the extent of his travels, and the variety, accuracy, and importance of the information he collected, his expenses must have been very considerable, unless it be supposed that with these he combined commercial speculations, to enable him to support the expense, of which we have no account. It is clear from his history that he had the faculty of eliciting truth from fabulous, imperfect or contradictory evidence, so necessary at all times to a traveller and an author, especially at the time and in the countries when and where he travelled. His great and characteristic merit consists in freeing his mind from pre-conceived opinions—in trusting only to what he saw, or what he learned from the best authority, always, however, bringing the latter kind of information to the test of his own observation and good sense. It is from the combined action and guidance of the above qualities, personal observation, and experience gained by most patient and diligent research and inquiry on the spot, and a high degree of perspicacity, mental energy, and good sense, that Herodotus has deservedly acquired so high a degree of reputation, and that almost in every instance, modern travellers find themselves anticipated by him, even on points where such a coincidence was the least probable to be expected. It is true, indeed, that he is justly chargeable in many instances with credulity. But this was owing to his superstition, whilst at the same time his love of truth prevented him from asserting falsehoods. It must be remembered, that Herodotus was a Pagan Greek, and that superstition was also common to many other great characters.

His travels embraced a variety of countries. He visited the Greek colonies on the northern side of the Euxine, and measured the extent of that sea, from the Bosphorus to the mouth of the Phasis. He diligently explored the tract between the Hypanis (Bog) and Borysthenes, (Nieper,) as also the shores of the Palus Meotis (Sea of Azof.) He visited Babylon and Susa, and while there, made himself acquainted with the satrapies of the Persian empire. The whole of Egypt was diligently explored by him, as well as the Grecian colonies planted at Cyrene in Libya. He was also well acquainted with the course of the Ister or Lower Danube, but there is no proof that he traced the course of the Ister from its mouth to nearly to its source, as Mr. Stevenson asserts, for in that case he must have known Germany. He merely says, that the Ister springs amongst the Celtae, at a place called Pyrene. Nothing more can be understood by this vague expression, than that the Danube rose somewhere in western Europe. He also visited Magna Græcia or a portion of southern Italy. With Greece he was intimately acquainted,

and his description of the Pass of Thermopylae is clearly the result of personal observation. Beyond these points where he travelled, as stated above, he trusted for information principally or entirely to the accounts of others, as the interior of Africa, the north and west of Europe, and Asia to the east of the Persian empire. His geographical knowledge in detail, embraced a circle of 2000 miles in diameter, of which Halicarnassus may be denominated the central point. This circular space included Greece, Italy, Thrace, Scythia, Colchos, Asia Minor, Assyria, Palestine, Egypt, Libya, and the Garamantes.

Beyond this circle his geographical knowledge gradually becomes obscure and uncertain, in whatever point of direction we advance, or, if any thing, more obscure on the European side than on that of Asia. His knowledge of north-western Europe extended no farther, than the sources of the Niester, Bug, and Pripeca rivers. In Italy he knew Umbria and Liguria from report, but had heard nothing of Rome. Of the tract between the Adriatic and the Transylvanian Mountains he knew almost nothing. Of the western coasts of Europe and the situation of the Cassiterides he frankly avows his ignorance respecting their detail. He had heard of the Celtae who lived beyond the Columns of Hercules, and who bordered on the Cynosias, but nothing more. Of the amber of Prussia he had heard, which he says came from the river Eridanus, which runs into the North Sea, (the Baltic.) Iberia or Spain and Tartessus are mentioned by him, but merely so. With the isles in the Mediterranean collectively taken he was well acquainted. South of the Baltic, he supposed the ocean to run eastward in an indefinite line, as far as his own knowledge extended. This formed the boundary of his Europe north of the Hyperboreans, in the parallel of 60° N. Lat. But Europe in his estimation far exceeded in length the other divisions of Asia and Africa, though in breadth, it was far inferior to either, and on the whole, he affirms that Europe was larger than Asia. In his opinion, Europe extended along the north of Asia, the Colchian Phasis being the boundary. From this point the boundary was carried eastward as far as his own knowledge extended, to the south of the Issedones. The Gryphins, the Arimaspi, and the Issedones, formed the north-eastern limit of Europe and of his knowledge.

Rennel has endeavoured to identify the Issedones with the Eluths, and consequently the modern Soongaria was the seat of the Issedones. He fixes the Arimaspi at the source of the Irish, and the mountains of Altai, and the Gryphins in the district of Kelyvan in Southern Siberia, thus carrying the knowledge of Herodotus to the heart of Central Asia, eastward. Our prescribed limits do not permit us to enter critically into the subject, or to examine the reasons of that able and enlightened geographer, for extending the limits of ancient Grecian knowledge so far eastward in the days of Herodotus. The subject is dark and perplexed. The knowledge of Herodotus and his successors on this subject was very limited and imperfect, and solely dependant on report. Our own knowledge of Central Asia is nearly as limited as that of Herodotus or Ptolemy, and it is not very probable that in such a case we can throw much light on the subject. To say the truth, I have much difficulty in subscribing to the opinion of Rennel respecting the geographical position he has assigned these ancient Scythian tribes. I

¹ Herodotus was born at Halicarnassus, in the year 484, before Christ. He read his history, composed in 9 Books in honour of the Muses, before the council at Athens in the year 445, 44 years before the expedition of the younger Cyrus, and 111 before Alexander crossed the Hellespont.

much question, if the knowledge of Herodotus extended further than the foot of the Beloor Tag, or the western declivity of Central Asia, and I strongly suspect, that farther north, his knowledge did not extend beyond the Rhipsean Mountains or the Ural Tag, to the east. It is clear that he places the Massagetes to the south of the Issedones. Now the former extended no farther east than the Beloor, therefore his Issedones could not be to the east, but to the north of the Massagetes, and therefore also to the west of the Beloor. It is true Ptolemy, in contradiction both to Herodotus and Pliny, has placed the Issedones in Scythia extra Imaum, or to the east of the Beloor. But as the Issedones, like other Scythians, were a migratory tribe, it is possible that in the days of Herodotus they may have roamed to the west of the Beloor, and occupied the northern part of Western Turkestan. There is no certainty besides that they were identical with the Soongarian Kalmucks. They may have been amongst the numerous tribes of Asiatic Scythia, who have become extinct, and disappeared from the stage of history. We have no clue to guide us on this subject. The Scythians were always barbarous and illiterate, were possessed of no history, knew nothing of their own origin, but from oral tradition, and therefore never did nor could communicate information respecting themselves to any one, and how therefore can we now identify the Issedones with any modern tribe? We know the Massagete to have become extinct, and why not the Issedones?

In Rennel's illustrations of Herodotus' geographical account of the 20 satrapies of Darius Hystaspes, that geographer will have the Sace and Casli (not Caspil, as he remarks, for these are placed by Herodotus in the 11th satrapy) to have included Kashgar in Eastern Turkestan, on the east of the Beloor Tag. In this way he has made Herodotus extend the Persian empire into Scythia extra Imaum, and identifies the Casli of this satrapy with the Casia of Ptolemy. There is not the least shadow of proof that ever the Persian empire extended to the Imaus versus ad Aretos, or the Beloor Tag. The Casli of Herodotus lay to the south of the Sace, and not to the north and east of that tribe, as Rennel affirms, and inhabited the valley of the Khaushkaur, or the Kama from its source to the northern foot of the Hindoo Kho, south-east of the Sace, and east of Badakshaun. This tribe were the same with the Comedi of Ptolemy who dwelt amongst the Sace, and therefore to the west of the Beloor.¹ But perhaps Caspil, which Rennel has exchanged for Casli, may, after all, be the true reading. The Scythian word Caspi, signifies a White Mountain, and Eratosthenes tells us that the Scythians called Caucasus, Caspius or the White Mountain. Now the Caspil in this satrapy may be a different people from the Caspil in the 11th satrapy. It may merely signify the inhabitants of the White Mountains, and as they are classed with the Sace in the 15th satrapy, it may denominate those who dwell in the Ak Tag, or the White Mountain, a snowy range that runs W. from the Beloor, and divides the tract watered by the Jaxartes and its tributary streams from the valley of the upper Oxus. The river of Samaracand, which rises in a lofty lateral range running south from the Ak Tag, to the Oxus, is called Ak Soo, or the White River. Now as we have in this region the Ak Soo, or

White River, the Ak Tag or White Mountain, which is just the Turkish translation of Caspi, or Caspius, why may we not have in this same region, the Caspil or inhabitants of Caspius or Ak Tag, the White Mountain. The Caspian sea is called Ak Denghiz by the Turks, and the range of Elbours to the north of the Kizil Ozan is called Ak Dag by the same people. Now the inhabitants of the 11th satrapy, I have no doubt, are the inhabitants of the Ak Dag or Caspius in the same way as those in the 15th satrapy, and classed with the Sace, are called Caspil, as inhabiting the Ak Tag between the Jaxartes and the Oxus up to the western declivity of the Beloor. In this way Herodotus is both reconciled to himself and to fact, using the term Caspil in the same way as he has used the term Mardil, as a generic name for mountaineers. It must be remembered also, that both the Sace and Caspil were Scythians. Now what is more probable, that, since Caspi and Caspius were Scythian words, those who inhabited the Ak Tag, would either denominate themselves in their own language, or be denominated by their neighbouring Scythians, Caspil. In this way we have no need to suppose a corruption of the text of Herodotus. Even if we should admit Casil, and not Caspil, to be the true reading, as Rennel thinks, it may be merely the Hindoo term for Mountaineers, from the Sanscrit Cas, a mountain, and may signify either the inhabitants of the mountain range between the Jaxartes and the Oxus, or those of the Beloor Tag, without supposing Kashgar or eastern Turkestan to be meant, for it is not once to be imagined that the Persian empire extended so far east, and that the modern Kashgar made part of the Persian satrapy, divided from the Sace by the whole breadth of Imaus versus ad Aretos. Rennel having thus made Kashgar to be the eastern part of the 15th satrapy, we need not wonder if he carry the knowledge of Herodotus as far E. as the Kobi or Shamo, the great sandy desert of central Asia, from 10 to 15 degrees E. of Kashgar. According to this supposition, Herodotus must have known more of central Asia than Ptolemy, who is altogether silent respecting the Kobi, or great sandy desert, of Soongaria and Mongolia, and seems to have been utterly ignorant of its existence.

Rennel's opinion is founded on the following expression of Herodotus. "As far as India, Asia is well inhabited; but from India eastward, the whole country is one vast desert, unknown and unexplored."² It is certain, says Rennel, that a vast tract of mountainous country shuts upon the east the quarter of India possessed by Darius, the part to which the Persians may be supposed to have pointed their inquiries, and which appears to be the part here intended. And moreover, that to this mountainous tract there succeeds the extensive sandy desert of Kobi (or Shamo,) and other Tartarian deserts of almost unbounded extent.³ It may perhaps be inferred, therefore, continues he, that the desert of Kobi was the remotest part of the east, known to Herodotus, and that when he spoke of the deserts beyond India, it was of this desert. This appears to me a very wonderful conclusion, that the desert beyond India was the Kobi. Had Herodotus in describing the Sace and Casli, (the Kashgar of Rennel) said that to the east of the Casli was one vast unknown and unexplored

¹ See note on Alexander's Marches, vol. ii. p. 188.

² R. v. c. 40.
³ Geog. of Herod. Examined, p. 107.

desert, the desert of Kobi might have been understood to be the desert which he meant, and if the Persians had really been possessed of Cashgar, they could hardly have failed to have heard of such a desert, as it lies directly to the east of Cashgar. By the desert E. of India, (for be it remembered, that it is India, and not the Sacæ and Casii, that he is here speaking of) he meant the large sandy desert east of the Indus, called Registan or the region of sand, reaching from the valley of the Indus, to within 100 miles W. of Delhi, comprizing a space of 40,000 square miles. For this we have Rennel's own authority, in the preface to his memoir of a map of India.¹ Quoting Herodotus, he has the following remarks on that historian's account of India. "The eastern part of India, says Herodotus, is rendered desert by sand, which description applies only to the country lying E. of the Indus, and south of the Punjab, and this (N. B.) shows pretty evidently that Herodotus' knowledge of India, as to particulars, extended no farther than to the above tract, and a collateral proof is, that he does not mention the Ganges, which became so famous a century afterwards. Indeed he tells us very plainly, that this sandy desert was the extreme point of his knowledge eastward." Again, p. 183 of the same memoir, "A sandy desert bounds Sindy on the east, and extends the whole way from the territory of Cutch to the confines of Mooltaun, being near 550 B. miles in length, and from 100 to 150 miles broad. Wendell in his account of Rajpootana, says that the country begins to grow sandy, immediately on the west of Ajnair, so that the desert must be exceeding wide in this part. This is the sandy desert mentioned by Herodotus, as the eastern boundary of India."

Here we have Rennel versus Rennel, declaring that the desert east of the Indus was the terminus of Herodotus' knowledge eastward. What other conclusion could any reader draw from Herodotus' own words, but that which Rennel himself drew when he composed his Indian memoir.—It is quite unaccountable how Rennel could have since that period altered his former just and rational opinion, and exchanged the Desert of Registan for that of Kobi. Between this desert and that of Kobi, the whole of northern Hindostan, including Cashmere, Ladak, all the elevated tract between the Heemalleh and the Mooz-Taugh, Yarkund, Khoten, and the Lake of Lop, intervened; and are we to suppose, without proof, that those Persians who supplied Herodotus with information respecting India, so superficial and imperfect as it is, had the smallest knowledge of these vast intervening tracts, mentioned above. Nay the wonder is not yet ended. Rennel affirms that the visit of Alexander to India had the effect of contracting the limits assigned to Asia, by such geographers as preceded him; for, says he, the system of Alexander admitted of no tract of land whatever beyond India,—making India the most eastern country of Asia, although Herodotus had extended a vast desert beyond it. Now, what is the fact. After Alexander had advanced as far as the Hyphasis, his army refused to follow him any farther. Why? Because a desert of eleven days' journey lay between them and the Ganges,—(such a tract does exist between the Hyphasis and the Jumnah)—and that all the tribes to the east of that river had confederated to oppose their march farther. Here

we have the very desert of Herodotus, and the Gangaride and the Prasii to the east both of this desert and river, arrayed in arms to resist him. Alexander never crossed this desert, but kept to the lower course of it till he arrived at the Hyphasis, where a large angle of it intervenes between that river and Batnir, and which he must of necessity have had to cross before he could have arrived at the western limits of the province of Delhi. Alexander of course not only knew of a vast desert beyond the India of Herodotus, but also of an India beyond it, which Herodotus did not know.

It is true Alexander did not know of any country beyond India. He supposed the Ganges to run easterly to the Eastern Ocean, which was believed to shut up India on that side, and to communicate with the Northern Ocean. If his India had been of the same dimensions with that of Herodotus, Rennel's remark might have been just. But the India of Herodotus extended no farther east than the vicinity of the Lower Indus, whereas the India of Alexander extended beyond the Ganges, and therefore beyond the vast desert mentioned by Herodotus. Is it possible to believe that Herodotus not only knew all India, but also the great desert of central Asia, and yet suppose him to have been utterly ignorant of all the interjacent space between India and central Asia? Not a single river of all India, the Indus excepted, is mentioned by him. Rennel infers from his denominating the Padai, one of the most eastern nations of India, that he meant the people inhabiting the banks of the Ganges, because the proper and Sanserit name of the Ganges is Padda, Ganga being a mere appellative. But these very people, in the idea of Herodotus, must have lived to the westward of the Great Sandy Desert, which he says lay beyond India, and could not at all answer to the Gangarides of later Greek writers, unless we choose to make Herodotus expressly contradict himself. These people are described as cannibals by Herodotus, a character which will not at all correspond to the Bengalese, who were never cannibals. Further, the Padai were a savage tribe, which inhabited the banks of the Paddar river, near its mouth in the Gulf of Cutch, to the south of the Great Desert, to the east of the Indus, and to the west of Gujrat or Guzurat. Both the province of Cutch and the western part of Gujrat have from time immemorial been inhabited by the most savage tribes in all India. Female infanticide was, till very lately, a common practice amongst these tribes, which confirms Herodotus' statement of the savage character of the Padai. In all the modern maps of Hindostan, including that of Rennel himself, the Sandy Desert is separated from the valley of the Lower Indus by a chain of rocky hills, called the Chalisuteli Hills, reaching in a south-west direction from beyond the 29th degree north lat. to the 24th degree. We may suppose this range to have been the terminus of Persian domination, and of the knowledge of Herodotus in this quarter.

Having thus stated, as I conceive, the eastern limit of Herodotus' Indian knowledge, we may conceive a line drawn from the most eastern branch of the Indus to the Chalisuteli range, from thence north-east alongst that range, to the 29th degree north lat.; thence a small distance north-west to the confluence of the Hyphasis and Acesines at Ouch; thence to Mooltaun, on the Acesines; thence to the Indus west, up the course of that stream as far north as Attock;

¹ 3d. edit. 1798, p. 22.

thence across the Indus, and westward along the northern bank of the river of Caubul, to its junction with the river of Khaushkur, up that stream, to its source S. of the Oxus; and thence along the western foot of the Beloor Tag, to the fountains of the Jaxartes. This line will represent the eastern limit of Persian domination, and of the Asiatic Geography of Herodotus. Of the Punjab I conceive he knew almost nothing. He did not even know that India produced elephants, or that it was bounded on the north by the vast Imans. The Issedones, as before observed, are placed by Herodotus to the north of the Massagetes, and occupied northern Turkestan, or the tract now occupied by the Great Kirgisian Horde, north of the Jaxartes, and west of the Beloor. From this point the Beloor passes north and joins the Alak Tag, or Speckled Mountain. Thence the chain is prolonged northward to the western extremity of the Great Altaian range. Here three ranges meet—the northern termination of the Beloor, the western extremity of the Altaian range, and the south-east termination of the Ulugh Taugh, which runs north-west from this central point to the Ural-Tau, dividing the Steppe of Ischim from that of the Middle Kirgisian Horde. I conceive this line, from the source of the Jaxartes, to the Rhiphaean range or Ural Taugh, to be the eastern and north-eastern limit of the geographical knowledge of Herodotus. D'Anville takes the Abii, Arimaspi, and Gryphins of Herodotus to have had no real existence, but to have dwelt in the region of romance. The Arimaspians are said by him to be so called, because they were all blind of one eye, and to have stolen gold which the Gryphins guarded.

It is but justice to Herodotus, to say that he did not believe the improbable story of the Arimaspians having but one eye. He places these Arimaspians to the northward of the Issedones, and to the E. of the Argippæi. Now, as he had placed the Issedones to the north of the Massagetes, it follows that these Arimaspians must be placed in the space occupied by the Steppe of the Lesser Kirgees, and the Gryphins in the range of the Ulugh Taugh. Rennel, having placed the Issedones east of Cashgar in the eastern extremity of the Lesser Bucharia, was obliged to place the Arimaspians north of them, at the source of the Irtysh, and in the vicinity of the Bogdo-Alin, or the Almighty Mountain, the highest range, as believed by the Kalmucks, of central Asia, and the Gryphins north of them in the metallic region of Kolyvan, in southern Siberia. That the Gryphins inhabited the metallic region of Kolyvan is deducible, in Rennel's opinion, from another place in Herodotus, where he affirms that in the north of Europe there is a prodigious quantity of gold, and that the Arimaspi take this gold by violence from the Gryphins. His reason for supposing that the region of Kolyvan is the one meant by Herodotus is because the region of Gryphins abounded with gold, and because the Altaian mountains, are so called from Alta, a word which, in the Mongol and Tartar languages, signifies gold. That the Altaian mountains signify the Golden Mountains, is perfectly true, but that they are so denominated from the abundance of gold they contain, is questionable. The word Alta or Alt is prefixed to many places which contain no gold, and is merely used when so applied, to denote eminence or excellence.—The mountains of Kolyvan form no part of the Altaian range, being separated from the Lesser Altaian range

by an interjacent valley, whilst the latter is separated from the Great Altaian range by a wide lofty plateau. The produce of gold, besides, in the mines of Kolyvan is but trifling; silver being the chief produce; being to that of gold, as 25 to 11.—Gold is much plentier in the Uralian Mountains than in those of Kolyvan, the principal gold mines of Siberia being those of Beresof, in the district of Katharineberg, on the east side of the Ural Taugh. This latter range is therefore more probably the one intended by Herodotus, than the region of Kholivan. It may also be remarked here, as additional confirmation, that a number of additional gold mines have very lately been discovered in the Uralian range. It is possible that the whole story of the Arimaspi may have originated in a misconception of the Greeks, who received it from the Scythians.

The Arimaspi, as Bochart justly remarks, were so called, not because they were universally possessed of but one eye, but because as they were much addicted to the practice of archery, they winked with the one eye, in order to take surer aim at the object. A musk-deer and musk is called by the Tartars (Scythians,) Grifa. Now, as the Arimaspians are said to have warred with the Gryphins or Grifins, who guarded the gold, it may mean nothing more than that the Arimaspians were addicted to the hunting of musk-deer, for the sake of the musk which they contain, and which is an article of great value in Siberia, Tibet, and China. The musk-deer is an animal which delights in cold, and cannot endure heat. It keeps entirely to the most inaccessible and remote heights among rocks and forests, that defy the foot of man. That the Arimaspians inhabited a cold mountainous region is admitted by Rennel himself, and is clear from the travels of Aristæus of Proconnesus, who came first to the Issedones, next to the Arimaspi, next to the Gryphins, guardians of the gold, and then to the Hyperboreans, who possess the whole country quite to the sea.—Here the Gryphins lie north of the Arimaspi, and south of the Hyperboreans. Now supposing the Gryphins to be altogether an imaginary people, as D'Anville justly thinks, we have the Arimaspi neighbours to the Hyperboreans, and inhabiting the Rhiphaean mountains or the Ural Tau, and addicted to the hunting of musk-deer which frequent the rocks and snowy summits of that elevated range. The whole story, therefore, of the gold guarding Gryphins has either originated in a verbal mistake, or is totally a fabricated tale to impose on the credulous.

The Gryphins of Herodotus were successively improved into monsters called Griffins, which make so distinguished a figure in ancient and modern heraldry, and which are represented as having the combined aquiline and bestial form. Pomponius Mela, who lived more than five centuries after Herodotus, and wrote a book of geography, tells us gravely, that the country beyond the Rhiphaean Mountains, though possessing a very rich soil, is yet uninhabitable, because the Gryphins, a cruel and stubborn race of wild beasts, which have a wonderful affection for, and watchful care of the gold thrown up from the bowels of the earth, and are hostile to all who touch it.¹ In a manuscript map of the 10th century, deposited in the Cottonian

¹ Deinde est regio ditis admodum soli, inhabitabilis tamen, quia Gryphæi sævunt, pernix feracium genus, aurum terra penitus æquum, mire amant, mireque custodiunt et sunt infestis attingentibus.—De Situ Orbis, Lib. ii. c. l. p. 140.

library, we have the nation of the Griffins placed between Armenia and Colchis. The story of the gold-watching Griffins has a kindred affinity to the fable of the Indian ants, possessed of much gold, in deserts amongst mountains, and which they constantly watched with the utmost care, vouched by Ctesias, Herodotus, Megasthenes, Arrian, and Pliny; and made by them equal in size to a large Hyrcanian dog; and which have been kindly furnished with wings and horns by Pliny, who seems to have had a great predilection for monsters. The Hindoos have their Griffins too, but these animals, instead of watching gold, like those of Herodotus and Mela, steal it. The Hindoo Griffin has the wings and beak of an eagle, with the body and legs of a man, but these latter are furnished with talons like the feet of the eagle. It is clear to me, that the Arimaspi, Argippæi, or Bald Heads, and the fabulous Gryphins of Herodotus must be placed between the Ural-Tau and the Ulugh-Tau, to the south-west of Siberia, and north-east of the Disht-Kipjack.

Respecting the Hyperboreans of Herodotus, they seem to have reached from the source of the Don or Tanais, north and north-eastward indefinitely to the sea. How far north and east they extended is impossible to say, but probably not farther north than 60° north lat. nor farther east than the western declivity of the Rhipæan or Uralian range, from the north of the source of the Jaik to that of the Kama. His Hyperborean Ocean, which he made the northern and north-eastern boundary of Europe, seems to have been in 60° north lat.; and the Hyperboreans lay between that Ocean and the Scythian tribes, as the Thyssagætæ, Arimaspi, Argippæi, and Issedones. The term Hyperboreans simply means those who dwell farthest north, and had different applications in different ages, as the ancients increased in geographical knowledge. As all those who dwell farthest south obtained the generic name of Ethiopians, so all those who dwell farthest north were termed Hyperboreans. The region of the Hyperboreans may be termed the *terra incognita* of Herodotus, for he says, that "of these people none of all the Scythians, the Issedones excepted, knew any thing, and what the Issedones say merits little attention." In his idea, therefore, Europe could not extend further north than 60° north lat. north-east to the Steppe of Ischim, and east to the Western Imaus, and southward to the Massagætæ. In his geography, the ocean surrounded the earth on three sides, the west, the north, and the south, but on the east there was no sea, the land stretching indefinitely east, for he says, "I cannot but think it exceedingly ridiculous to hear some men talk of the circumference of the earth, pretending, without the smallest reason or probability, that the ocean encompasses the earth, that the earth is round, as if mechanically formed so, and that Asia is equal to Europe." And again, in the 8th chapter of the same book, (they affirm, without proving it, that the ocean, commencing at the east, flows round the earth.)

Here two facts are stated, as known in his day, but disbelieved by him, the globularity of the earth, and its being encircled with the ocean. The persons whom he thus ridicules were the disciples of Thaïes and Anaximander, of Parmenides, and Pythagoras, who all maintained the rotundity of the earth, especially Anaximan-

der, who demonstrated the diurnal motion of the earth, and maintained its circumference to be 400,000 stadia. In point of science, therefore, and natural philosophy, Herodotus was very far below several of his contemporaries, who had imbibed the doctrines of the Ionic and Pythagoric schools. He did not believe in the existence of snow, in elevated situations, in warm countries.¹

But the most wonderful of his errors is his belief that the sun was vertical, or at his meridian height, not at mid-day, but in the morning, amongst the Indians. "They have a vertical sun, when with us people withdraw from the Forum, during which period the warmth is more excessive than the mid-day sun in Greece."² This, says he, "distinguishes the Indians from all other people." This is lamentable ignorance, and is wholly owing to the not reducing the time to the meridian of the place. The Indus is about 45 degrees, or three hours east of Greece. It would therefore happen, that when it was nine o'clock in the morning in Greece, it would be noon on the banks of the Indus. Now, nine in the morning was the time, in Greece, when the Forum was full. Another proof of his ignorance, is his strange unphilosophical way of accounting for the annual inundation of the Nile, by the sun's being drawn out of his course. Respecting the Caspian Sea, his knowledge is surprisingly accurate, when compared with the ideas of succeeding geographers, and when it is considered that his information on this point was wholly from the accounts of others. He describes it as an inland lake or sea, unconnected with any other.³ Its length, he adds, is as much as a swift-oared vessel can accomplish in 15 days, and its breadth as much as can be sailed in eight days. This computation is very near the truth, as it allows 40 geographical miles a day for such vessel, a rate quite consistent with that of ancient ships. Its breadth is thus made very little more than half its length. This, if understood generally, is considerably too much, but is not far beyond the truth in its northern extremity, which is more than 300 miles broad, from the head of the Bay of Menkishlak to the opposite coast, and this was perhaps what he intended. That he made its greatest length from north to south is clear from what he adds: "Caucasus bounds it on the west, the largest and perhaps highest mountain in the world, and inhabited by different nations."⁴ "On the east, it is bounded by a plain of prodigious extent, a considerable part of which is inhabited by the Massagætæ."⁵ The above description shows that he had juster ideas respecting the figure and direction of the Caspian Sea, than existed in after ages, down to the commencement of the 18th century. Down to the days of Ptolemy, a period of six centuries, with the exception of Aristotle and Diodorus Siculus, succeeding geographers, as Eratosthenes, Strabo, Pliny, and Pomponius Mela, believed the Caspian to be a gulf of the Northern Ocean, connected with it by a strait; and even the judicious Arrian, the biographer of Alexander the Great, asserts that there was a communication between the Caspian Sea and the Eastern Ocean. He also possessed some knowledge of Southern India, a country very remote from the Persian conquests, the inhabitants of which were as black as the Ethiopians. By such people he undoubtedly intended those of the Peninsula.

1 Lib. v. c. 36.

2 Lib. vii. c. 92.
5 lib.

3 Lib. iv. c. 104.
6 c. 304.

4 Lib. ii. c. 203.

His description of their mode of living is accurate; and he says that they clothed themselves in cotton cloth fabricated of the finest of their wool. This information was undoubtedly derived from the Persians, who would learn it from their Indian subjects at the mouth of the Indus. Respecting the Euxine Sea, he over-rated its length by 3000 stades; under-rated the breadth of Asia Minor by nearly one-half; and made the Palus Meotis nearly as large as the Euxine Sea, extending it far to the north and east beyond the truth, and that it lay as much north and south as east and west. Respecting Africa, he knew more than Ptolemy, *vastly more* than Strabo. He carries the course of the Nile four months' journey, or 1,200 geographical miles, to the south of Syene, which would suppositis course to be in 4° north lat. a notion which would lead us to conclude that he intended the Abiad or Western Nile to be meant, and not the Abyssinian branch. Yet, in contradiction to this, he supposes that the Nile rose far beyond the Greater Syrtis, and the country of the Nasamones. On the authority of Etearchus, king of the Nasamones, he relates a journey into the interior of Africa by five of the Nasamones, who travelled first through the inhabited tract, (Fezzan,) then through the space infested with wild beasts, afterwards westward through the Desert, and were finally taken prisoners by men black and of a diminutive stature, and carried to a city washed by a great river, which flowed from west to east, and abounded in crocodiles.¹ He adds,² that in the opinion of Etearchus, mentioned above, the river in question was the Nile.

This, continues he, probability confirms—the Nile certainly rises in Libya, which it divides; and if it be allowable to draw such a conclusion, it takes a similar course to the Ister, Lower Danube, which bends to the north-east towards Bessarabia.) This is no other than the far-famed Niger, or great inland river of Africa, which really runs east and south-east, but which he took for the Nile. It may be supposed that Herodotus first conceived, and justly, that the Nile came from the south, as he was told, but that afterwards he altered his opinion, on the authority of Etearchus, and the Nasamonian explorers. We might have supposed that in his opinion the Nile had two great branches,—the western or Nasamonian river, and the southern or Ethiopian river, had he not previously asserted³ that the Nile had no adjunct streams. Perhaps he might have heard of the Abiad or White River, and taken it for a continuation of the stream seen by the Nasamones. It is to Herodotus, however, that we are indebted for our first notices respecting the Niger, and its line of course, however wrong he may have been in identifying it with the Nile. From his day down to those of Pliny and Ptolemy, there is utter silence respecting such a river as the Niger, an interval of nigh 600 years. Both of these agree with Herodotus, in making the Niger run from west to east. But they make it quite a distinct river from the Nile, though equally ignorant as he, respecting the termination of its course. It was from the conquest of the Garamantes of Herodotus, by Cornelius Balbus, that the name Niger, or River of the Negroes, became known to the Europeans.

Respecting Africa in general, we are sure that the information of Herodotus extended it as far south as the equator, and perhaps beyond it, but

how far it is impossible to say. It is also clear that he believed Africa to have been circumnavigated by the fleet of Pharaoh Necho, as has been shown in our supplementary article on the commerce of the ancients, so that in this respect he knew more than Ptolemy himself, as has been shown in the article above referred to; yet his detailed knowledge of Africa extended only to the Upper Nile, and on the south-west to the Niger; and admitting that he knew the fact that Africa was surrounded by the ocean, except at the Isthmus of Suez, still he knew no particulars relating to its coasts, beyond where the Carthaginians traded, on the west side, nor on the eastern side beyond the outlet of the Arabian Gulf. On the Mediterranean side, his detailed knowledge extended no farther west than the vicinity of Carthage.—Beyond Carthage as far as the Pillars of Hercules westward, Herodotus seems to have known nothing.

There is, however, a very remarkable fact mentioned by Herodotus respecting the state of geographical science, about half a century before he published his history, and very shortly preceding the Persian invasion. It occurs in B. v. c. 49, where he says that Aristagoras, prince of Miletus, appeared before Cleomenes, the Spartan king, with a tablet of brass in his hand, upon which was inscribed, *every known part of the habitable world, the seas and the rivers*, and to this tablet he pointed, as he spoke of the several countries between the Ionian Sea and Susa. This is the first of the kind mentioned in history, and appears from what has been said of it in our note on the river Gyndes,⁴ to have been a very vague, rude, and imperfect performance; but it is probable that geographical tablets of this kind, however rude and imperfect, were in use amongst the statesmen and men of science in those days. What a feast for an antiquary would this tablet have been had it been preserved. The curious reader may see the geography of this tablet discussed by Rennel in his illustrations of Herodotus.⁵ We are told by Allian⁶ that Socrates produced a map of the world, and desired Alcibiades, who was valn of the extent of his landed property, to point it out, or even the whole extent of Attica. Such a map, perhaps, a copy of that of Anaximander, must either have been very defective, or the scale of it extremely small, otherwise Alcibiades could easily have complied with the latter part of the philosopher's request.

In assigning the limits of Herodotus' geographical knowledge in Asia, we must leave out all India east of the Registan, or country of Sand, and the whole of central Asia and China, together with the whole of Siberia. In Europe, all beyond 60° north lat. must be deducted, as also all that part of Europe which lay west of the Lower Danube, between the Alps and the Baltic. In Africa, all to the south of the equator, and to the west of the parallel of Carthage. He was also ignorant of the existence of the Persian Gulf, as he describes the Euphrates as falling into the Erythrean Sea, or Indian Ocean.

We conclude our statement respecting Herodotus, that he is singularly correct in his classification of the inhabitants of Africa, dividing them into two great bodies—Africans and Ethiopians—the latter being placed south of the former, or the Moors and Negroes, which is exactly the case at this very day.

1 B. vii. c. 32.

2 c. 33.

3 B. v. c. 50.

4 Vol. I. p. 202—205.

5 P. 384—335.

6 Lib. iii. c. 28. Var. Hist.

Xenophanes, the founder of the Eleatic sect, who flourished 40 years posterior to Anaximander, maintained that the stars were extinguished every night, and lighted up every morning; that the sun is an inflamed cloud; that eclipses are caused by a temporary extinction of the sun; that the moon is 18 times bigger than the earth, and inhabited; that the different climates of the earth are enlightened by their respective suns and moons, &c. The philosophical principles of Parmenides, Anaximenes, Anaxagoras, Archelaus, Pythagoras, Philolaus, and Hicetas, need hardly be mentioned, as they have very little reference to geography, strictly speaking, being more directed to the heavens than the earth. One of these wise men, indeed, (Archelaus), maintained that the motion of the earth was caused by wind, but what caused the wind he did not say, unless that, with his master Anaxagoras, we suppose he attributed it to the rarefaction of the air. After the time of Herodotus, the ancients seem to have remained nearly stationary for a considerable period in their knowledge of geography. Astronomical observations were indeed made in Greece, by Cleostratus, Meton, and Eudemon, but it does not appear that these astronomers knew how to apply them to geography. So inconsiderable was the geographical knowledge of the Greeks, that Ephorus, who was nearly cotemporaneous with Aristotle, supposed Iberia or Spain to be a city, and reckoned Cadiz the western limit of the known world, yet this Ephorus was esteemed an accurate geographer and historian. He composed a history comprehending a period of 750 years, in which he inserted geographical descriptions of many parts of the terrestrial globe.

Aristotle, the scholar of Plato, and founder of the Peripatetic philosophy, contributed much to the fundamental principles of geographical science, by inferring from the observations of travellers the sphericity of the globe, and that the stars seen in Greece were not visible in Cyprus or Egypt. He estimated the longitude or length of the habitable world, that is from the Pillars of Hercules to India, to be to its latitude or breadth, or from Ethiopia to the extremities of Scythia, as 5 to 3. He supposed the rest of the globe to be uninhabitable from burning heat and perpetual congelation. In its details geographical science received little advantage from him. He supposed the coasts of Spain not to be very distant from those of India, and even adopted a modified notion of Homer's Ocean River, which had been ridiculed by his predecessor Herodotus, for he describes the habitable earth as a great oval island, terminated on the west by the Tartessus (the Guadalquivir), on the east by the Indus, and on the north by Albion and Ierne (Britain and Ireland), of which islands his ideas were necessarily very vague and imperfect. He however admitted with Herodotus, that the Caspian Sea was a great inland lake, having no communication with any other sea.

Pytheas of Marseilles, who lived a short time before Alexander the Great, has been celebrated as an astronomer, navigator, and geographer. It is needless to speak of his voyage, for it is impossible to identify his Thule with any known spot in the northern hemisphere. He was the first who established a distinction of climate by the length of days and nights, and he is said to have discovered the dependance of the tides upon the position of the moon, affirming that the flood tide depended on the increase of

the moon and the ebb on its decrease. He determined the latitude of Marseilles by means of a gnomon, by which he ascertained the sun's altitude, at the summer solstice, to be $43^{\circ} 17'$ at that place, an observation which has been verified by succeeding observers. He relates, that in his voyage to the north, the sun at the summer solstice, touched the northern part of the horizon. He pointed out three stars near the pole, with which the north star formed a square, and within this square he fixed the true place of the pole. According to Strabo he fixed his first meridian at Thule, which he considered to be the most western part of the then known world, and reckoned his longitude from thence. But no geographer has yet been able to fix the site of the Thule of Pytheas. The veracity of Pytheas is utterly denied by Strabo and Polybius, and amongst the moderns by D'Anville, and strongly suspected by Dr. Vincent. The most probable opinion respecting the site of the Thule of Pytheas is that which identifies it with a district on the coast of Norway, called Thelemark, between 60° and 62° north latitude, where the sun at the summer solstice would be exactly north. This is the supposition of Ptolemy himself. But the Thule of Agricola, Tacitus, and Ptolemy, is evidently one of the Shetland Isles (the Roman Thule), though Ptolemy has placed it about 3 degrees too far north.

The conquests of Alexander formed a new era in the science of geography. By means of these the Greeks acquired a detailed knowledge of Asia, from the Hellespont to the Hyphasis, and from the Persian Gulf to the Jaxartes, and obtained a knowledge of the Ganges, and of India beyond the Registan, or Sandy Desert, both of which were unknown to Herodotus. In his march westward from the Indus to Susa, he employed Diogenetus and Baton, two distinguished geometricians, as we are informed by Strabo and Pliny, to draw up surveys of the intermediate provinces, and reduce them, as well as the marches of his army, to regular measurement, and thus the distances being accurately set down, and journals faithfully kept, the principles of geographical science next in importance and utility to astronomical observations, were established. In addition to the journals of Diogenetus and Baton, both of whom may be styled the quarter-masters general of the Macedonian army, were those of Nearchus (happily preserved by the judicious Arrian,) of Aristobulus, and Ptolemy, afterwards king of Egypt. Of all these, with the exception of that of Nearchus, we have only extracts, furnished us by Diodorus, Strabo, and Arrian. Had the journals of Diogenetus and Baton been preserved entire, and had they reached our times, they would have thrown much light on the interior geography of the Persian empire, with which the moderns are still very imperfectly acquainted. A glance over the map of Asia will show that his marches northward and eastward, and the double route of his army westward, the one under Cratorus, through the centre of the Persian empire, and the other headed by Alexander himself through the maritime provinces, intersect the whole space by three lines, from the Indus almost to the Tigris.

But the full benefit that might have accrued to geographical science from the marches, the victories, and the conquests of Alexander, was never realized by posterity. Unfortunately for mankind and for science, military renown and warlike achievements have always had a fac-

nating influence on the human mind, and been uniformly more prized than they deserved. The popular taste has almost always in matters of history and subjects of poetry been exclusively directed to the contemplation of the *confused noise of the warrior, and of garments rolled in blood*. Hence the delight that is so commonly felt in reading or hearing of deeds of savage valour, and acts of romantic heroism; of sanguinary battles, rapid marches, and military stratagems; of cities stormed, plundered, and burned; of murdered myriads, wasted provinces, and ruined empires. On account of this perversion of public taste, Alexander the Great is known to mankind only as a sanguinary conquering hero, as the first in the roll of warriors, and therefore the records of his battles and his victories, of his valour and his cruelties, have been carefully preserved, and as generally read and admired, whilst the geographical details of his expedition and conquests, as those of Diogenes and Bæton, have been neglected and lost. The peaceful records of the commencement and progress of science have no charms for the public mind, and are therefore only read and studied by the few. It is a well known fact that though geographical science is as much indebted for its progress and extension to conquest as to commerce, yet the geographical results are comparatively neglected and overlooked, whilst the historical details of those events which led to these results are carefully perused. Alexander was a man of science as well as a man of war, was passionately fond of natural history and geographical science, and did much to increase both. Had this mighty conqueror lived to perfect his schemes, Europe and Asia would have been united in the bonds of commercial amity, the science of Europe, whether military, political, or philosophical, would have irradiated the darkened regions of the east, and the bounds of geographical science been vastly enlarged. But his death frustrated these grand and beneficent views, and the successive contests of those who enjoyed the fruits of his conquests, obstructed for a considerable period all that friendly intercourse which is propitious to geography.

By the voyage of Nearchus from the Hydaspes to the Indus, and from the Indus to the mouths of the Tigris and Euphrates, a knowledge of the hydrography of the Punjab, the Erythraean Sea, and the Persian Gulf, was acquired, and the latter was no longer confounded with the former, as was done by Herodotus. A survey was also made of the Arabian or western side of the Persian Gulf, by Archias, Androthenes, and Hiero, but the details have not reached us. Hiero proceeded down the Gulf, doubled Cape Mussendom, sailed down the coast below Muscat, and came in sight of Cape Ras-hal-had, which he durst not double, and then returned up the gulf. A survey was also taken of the Delta of the Euphrates and Tigris, and the Euleus or Karoon. The channel of the Tigris was also examined up as far as Opis, its highest navigable point, and that of the Euphrates, down to the Marsh of Pallacopas. By some strange fatality, however, these surveys of the Delta of Susiana, and the lower courses of the Euphrates and Tigris, made little or no addition to the knowledge of the ancients respecting the sea coasts of Chaldea and Susiana, or the number and courses of the streams, that in these regions, enter the Persian Gulf. Not one word is said of the connecting canals of the

Euphrates and Tigris, nor of the Shat-al-Hye, or large branch of the Tigris that falls into the Euphrates, nor of the large triangular tract called Al-Battha or the Marshes. All the knowledge the ancients derived from the surveys of Alexander, just mentioned, may be found in the pages of a Strabo or an Arrian, and their descriptions are just confusion worse confounded. Such an opportunity as was presented by the conquests of Alexander and his inquisitive mind, might have led to a complete topographical knowledge of Chaldea, Babylonia, and Susiana, of the Susian Delta, the rivers of Susiana, and of the courses and junction of the Euphrates and Tigris. If such addition to geographical science was ever actually made, it has never appeared, and such an opportunity was never again presented, these tracts being in no very long space of time wrested from the feeble successors of Seleucus by the Parthians.

Respecting the voyage of Nearchus, it may be remarked, that so inconsiderable was the skill of the Greeks in maritime science, that seven months were spent in accomplishing a voyage, which may now be performed with ease in the short space of 10 days, the whole distance from the mouth of the Indus, to that of the Euphrates, being 1,330 Geogr. miles, or 1,450 British miles. A survey of the Caspian Sea was also ordered by Alexander, and Hæmelides was despatched into Hyrcania, or Mazanderaun, to cut down timber and build vessels for that purpose. Had this great design been executed, it would have prevented succeeding geographers from converting the Caspian into a gulf of the Northern Ocean. It is very surprising that the campaigns of Alexander beyond the Oxus, and on the shores of the Jaxartes, made no addition to geographical knowledge in that quarter, that no word was heard of the Lake of Aral, and that the followers of Alexander should have converted the Caspian Sea described, and that correctly, by Herodotus, as a great inland lake, into an arm of the Northern Ocean.

The foundation of Alexandria in Egypt, laid by Alexander, was a great mean of increasing the future geographical and hydrographical science of the ancients, both in the direction of the Red Sea and India. It has been said that the books which till Alexander's time, had been shut up in the archives of Babylon and Tyre, were transferred to Alexandria, and that consequently the astronomical and hydrographical observations of the Phenicians and Chaldeans becoming accessible to the Greek philosophers, supplied them with the means of founding their geographical knowledge on the sure basis of mathematical science of which it had been hitherto destitute. I very much doubt the truth of the assertion. Ten years elapsed between the destruction of Tyre, and the death of Alexander, and no idea of transferring the Tyrian books could enter his mind at its storm and capture. Not a word is said in the life of that conqueror, that any such transference was made, and the library of Alexandria was not founded by him, but by Ptolemy Soter, many years after his death. If any such books existed at Tyre, the probability is, that they perished in the catastrophe of the city, or were removed by the fugitives. There is not the least appearance that the Babylonish books were transferred to Alexandria. Alexander intended to have made Babylon his capital, and had a great affection for the Babylonians. Now what probability is there

that he would strip the Babylonians of their books, and ship them off to Alexandria. It should also be remembered that whatever books of science were composed by the Phenicians and Babylonians, would be written in the Phenician and Chaldee languages, and consequently could be of no use to the Greeks, unless they could read them. The Greeks had too great a conceit of themselves, and of their own language, and too great a contempt for the science and language of the East, to be at all disposed to learn these languages, for the sake of knowing what sciences these people possessed. There is no proof that ever the proud Greeks studied or cultivated any other language or science but their own. They denominated all others but themselves, barbarians, and scouted the notion that they should be indebted to them for anything. It is impossible to suppose that if the Phenicians kept hydrographical charts and observations down from the time when the ocean was first ploughed by their adventurous ancestors, till the time when their city was stormed and razed to the ground by Alexander; and that if such had come into the possession of the Greeks, and these latter had studied the language in which such charts and such recorded observations were made, that they should have remained so ignorant of the circumnavigation of Africa, of its peninsular form, of the navigation of the Red Sea, the Persian Gulf, the Erythrean Sea, and of the coasts of India, not to mention the western coasts of Europe. As to the astronomical observations of the Babylonians, I do not see of what great use they could be to the Greeks, so much connected as these were with judicial astrology. It is strange, that if the Greeks knew and possessed these astronomical treasures, so little benefit was reaped from them, if they possessed all that value which some are disposed to ascribe to them. It is strange, that these Babylonish astronomers either did not, or could not fix the position of their own city, and that in despite of these observations, the ancients remained so deplorably ignorant of the interior geography of Babylon and Chaldea. The fact is, geography owed its progressive improvements solely to the labours and industry of the Greeks, and not at all to any recorded Babylonish observations or pretended Phenician charts. Not a single Babylonish or Phenician document is ever referred to or quoted by any of the eminent astronomers and geographers of the Alexandrian school.

Patrocles, an officer of Seleucus Nicator, visited several parts of India and Scythia, and published a journal of his travels, in which he copied the observations of Onesicritus and Orthogoras, and others, who had accompanied Alexander in his Indian expedition. But this journal and these observations have been lost. He is quoted by Strabo,¹ as affirming that the mouths of the Oxus and Jaxartes, are 80 parasangs distant from each other, which agree with modern knowledge. Dicaearchus of Messene, his contemporary, published several treatises on geography, of which three fragments are extant.² The first is inscribed a Tour through Greece, being a description of the relative distances and situation of several cities; an account of the inhabitants, and the intermediate parts of the country. The second contains the same subject in verse, which was designed to impress on the minds of youth, the names of

places inserted in a geographical map of his own construction. This work was dedicated to Theophrastus, the successor of Aristotle, who corrected and improved the map, and in his last will, ordered it to be replaced in a portico built for that purpose. The third, a treatise on mountains, was, if we may judge from what it remains, composed with great judgment, and has been quoted with approbation both by Pliny and Geminus.

In the time of Seleucus Nicator, geography received a farther accession from the embassy of Megasthenes to Palibothra, the capital of Sandracottus, king of India, where he remained several years, and on his return, published an account of India, fragments of which are given by Diodorus Siculus, Strabo, Pliny, and Arrian. His account of the form and dimensions of India is both curious and accurate, and approaches nearest the truth of any accounts the ancients have left us of that country. It also shows, as Heunel well remarks, that Megasthenes had as just an idea of the proportional dimensions of India, as we had 80 years since, as it was then reckoned narrower than the truth, by two degrees from east to west. Still farther knowledge respecting India was derived by a second embassy to the son and successor of Sandracottus, by Daimachus.

The erection of the Museum and Library at Alexandria contributed much to the advancement of geographical science. Ptolemy Philadelphus was an eminent patron of that science. Pliny mentions several celebrated geographers, as Dallon, Bion, Buselis, and Aristocreon, as having visited Ethiopia or Nubia, and contributed to the geographical knowledge of that country, and Simonides, as having resided five years at Meroe (Merawe). Timosthenes lived in the reign of this prince, and published a description of the known sea-ports, and a work on the measure of the earth. Aristillus and Timochares, eminent astronomers, made several important observations, and introduced the method of determining the places of the stars by their own longitudes and latitudes with respect to the equator. These observations were corrected and improved by their contemporaries, one of whom was Euclid, the celebrated mathematician. By illustrating the theory of the sphere, and explaining the principles of geometry with precision, he contributed essentially to the improvement of geography.

Eratosthenes, who flourished under Ptolemy Evergetes, and was keeper of the Alexandrian library, was a native of Cyrene in Africa, and died at the advanced age of 81, 194 years before Christ. This celebrated personage was the most eminent geographer that had yet appeared, and published several treatises on that science, which have not been preserved. He corrected the maps of Anaximander and Dicaearchus, and introduced into a map of his own construction, a meridian line which passed through Rhodes, Alexandria, Syene and Meroe; and described an arch of longitude which extended from the Promontorium Sacrum (Cape St. Vincent), through the Pillars of Hercules, Rhodes, Issus, &c., to the mountains of India. On this parallel, the longitude of the known world was often attempted to be measured by succeeding geographers. By means of instruments erected in the museum of Alexandria, Eratosthenes found the obliquity of the ecliptic to be 23° 51' 20". But his name has been immortalized as the first who

¹ Lib. xv. ² Huds. Minor. Geog. Tom. ii.

attempted to determine the circumference of the earth by an actual measurement of a segment of one of its great circles. This segment extended from Alexandria to Syene. The principle on which he proceeded is the very same which has been attempted by all succeeding geographers. The circles of the celestial sphere correspond to those of the terrestrial globe. It follows, therefore, that a degree of the former holds the same proportion to the circumference of a great circle in the heavens, as a degree of the latter to the circumference of the earth. If, therefore, the distance between any two places, under the same meridian, on the surface of the earth, be accurately known, and if, at the same time, an arch of a great circle in the heavens, between the zeniths or vertical points of those places be measured, the quantity of one degree may be easily found. By means of gnomons or sun-dials, Eratosthenes found that Syene, near a rapid of the Nile, was situated in the meridian of Alexandria, and under the tropic of Cancer, so that at the time of the summer solstice, the sun was vertical to that place, and the gnomon had no shadow at mid-day. Again, having measured the angle of the shadow of a gnomon at Alexandria at the time of the summer solstice, he found the distance of the sun from the zenith to be $7^{\circ} 12'$, or 1-50th part of the circumference of a great circle. He then computed the distance between Alexandria and Syene, which corresponded to the celestial arch already determined, to be 5000 stadia. Then multiplying 5000 stadia by 50, he obtained a product of 250,000 stadia as the measure of the earth's circumference, the 360th part of which, or one degree consists of 694 4-9th stadia, of 547 4-10ths English feet each; one degree therefore, according to Eratosthenes, contains 71.24 English miles. But if 700 stadia be taken, for a degree, which is really the estimate of Eratosthenes, and 252,000 stadia as the earth's circumference, the error would be increased. Eratosthenes, however, committed several errors in this operation. Syene is not in the same meridian with Alexandria, as he supposed, but $2^{\circ} 59' 19''$ east of it, so that a meridional arch intercepted by the parallels of these places, is less than an arch extended to their zeniths. Syene, instead of being directly under the tropic, is 35 minutes north of it.

The gnomon having no shadow at Syene, at mid-day, will not prove it to be directly under the tropic, because such a circumstance does take place, though the centre of the sun be some minutes distant from the zenith or vertical point. It is not certain if the gnomon of Eratosthenes was globular at top, or merely ended in a point, as this difference would increase or diminish the intermediate distance of Alexandria and Syene. Alexandria is $31^{\circ} 13' 5''$, instead of 31° , as determined by Eratosthenes. If Syene should be supposed directly under the tropic, and if the obliquity of the ecliptic was $23^{\circ} 51' 20''$, the arch between these places would exceed the computation of Eratosthenes. But these errors would have diminished that of the circumference. For if a deduction be made for the difference of meridians, and, if instead of 5000 stadia, 4889 stadia be reckoned, we shall have 666 stadia, or 69.05 English miles for a degree of a great circle, which almost coincides with the determination of modern astronomers, a degree being found by actual measurement to be 68.82 English miles in the latitude of Alexandria.

Pliny has passed a high eulogium upon

Eratosthenes, and if we consider the rude and imperfect state of science at that time, and the paucity and inadequacy of the instruments then employed to improve it, we shall not be disposed to question the justice of the panegyric. In his map of the world, as we are told by Strabo, the Oriental part of it was delineated from the surveys of Diogenes and Bæton. But the whole of it contained little more than the states of Greece and the dominions of Alexander's successors; for as Strabo observes, he was not acquainted with the western parts of the world, nor with the regions bounded by the Northern Ocean. Thina was the eastern extremity of his map, and the Sacrum Promontorium the western. His meridian line extended from the latter point to the former. Thina consequently was placed in the parallel of Rhodes, a parallel which passes through the empire of China within the Great Wall. Strabo informs us, that Eratosthenes asserted that Thina had been, previously to the construction of his map, incorrectly placed in the more ancient maps. Now Thina is also the most eastern position in Ptolemy's geography. But for Strabo, we should not have known that the ancients were acquainted with Thina or Thina, and that it had a place in their maps before the time of Eratosthenes, and that from their time, to that of Ptolemy, even down to the time of the Arabians, Thina was the most eastern point of the world known to the ancients. His position of Meroe, in respect of latitude, is not far from the truth, and was probably derived from Simonides, who lived five years there. From the Promontorium Sacrum, to the mouth of the Ganges, Eratosthenes reckoned 70,000 stadia, which at 700 to a degree, amount to 6000 Geo. miles. Now the direct distance between these points is 4970 Geo. miles, or 1030 less than the calculation of Eratosthenes. But the lines of distance across the continent of Asia were given by the ancients in road measure, and not in direct distance, as Rennel has proved by an induction of examples. If 1-7th, therefore, be added for inflexions, or 710 Geo. miles, then 5680 will be assumed for the road distance, so that the difference between the calculations of Eratosthenes will be only 320 Geo. miles, which is not great on so long a line. His estimate of 3000 stadia for the Isthmus of Asia Minor between Issus and Amisus, if meant for direct distance across, is the justest that the ancients have left us. Taking these at 700 to the degree, the intermediate space is 257 Geo. or 300 English miles, being only 20 English miles within the truth.

By another statement, 3700 stadia are given by Eratosthenes, between Issus and Amisus, which is possibly intended for road distance, and if so, very little exceeds the truth, if 1-7th be allowed for inflexion, the intervening space being very mountainous. It is nearer the truth than the map of D'Anville. Between Gades and Issus, he made the distance 28,843 stadia, or 2,472, Geo. miles. or 2,450 English miles, or 520 English more than the truth, or 9 1-4th degrees of longitude more than the real distance in the parallel of 36° N. lat. It must be remarked that the distance is only computed, and that not in a direct line, but along the coasts. The longitude of the Mediterranean was not taken from a series of celestial observations made at the Pillars of Heracles and Issus, but from the computed sailing distance chiefly along the coasts, from the one point to

the other, or in other words, the relative longitudes of the two points, were inferred from the computed distance, and not the real distance from the true ascertained longitudes; the computed distance was assumed as the real distance, and thus the longitudes were fixed. The same remark is applicable to the computed distance between the Sacrum Promontorium and Canopus at the mouth of the Nile, estimated by Eratosthenes at 24,500 stadia, or 2,100 Geo. miles, which is 100 Geo. miles, or only 1-20th part more than the real distance.

But erroneous as these estimates of Eratosthenes were, they were nothing compared to those of Ptolemy at a much later period. However, several gross errors were committed by Eratosthenes in other longitudes, along the coasts of the Mediterranean, as in those of Carthage and Dyrrachium, making the former to be 15,000 stadia west of Alexandria, instead of 9000 the real distance, and the latter 900 stadia from Thermæ, (Salonica) on the Egean Sea, instead of 2000 the true distance. His latitudes in some points were, notwithstanding, tolerably accurate, as those of the Pillars of Hercules, Rhodes, Issus, the Caspian Gates, which are really near the truth, and even the northernmost point of Scotland is fixed by him at 61° N. Lat. or 2° 23' more than its ascertained latitude, which, considering the very slender knowledge which at that early period must have been possessed of Britain by the Greeks, is nearer the truth than might have been expected. His agreement with Herodotus respecting the peninsularity of Africa has been already mentioned. We are informed, however, by Marcellan of Heracles, that the whole of the geographical knowledge of Eratosthenes was derived from the work of Timosthenes, which, preface and all, was used by him, and even the very same words, in the construction of his map. But this has nothing to do with his astronomical labours in determining the figure and circumference of the earth.

The next person to whom geography was indebted, was Agarthæides, but as his discoveries have been already illustrated in our account of commerce, the reader is referred to that article.

Hipparchus next appeared on the stage as an improver of geographical science. Few particulars are known of him. Even the epoch in which he flourished is not exactly ascertained, varying from 159 to 129 years before Christ. It is on his astronomical labours that his fame chiefly rests. He possessed the true spirit of philosophy, as it was his general rule to take nothing for granted. Setting aside all that had been taught by former astronomers, he began anew, examined and judged for himself, and admitted no truths but such as were grounded on observation and experiment. Having made many important astronomical observations at Nice, Rhodes, and Alexandria, he proposed, by means of these, to fix the longitudes and latitudes of places, and instead of determining the latter as had hitherto been the practice, by gnomons, to do so by the position of the stars. For determining the longitudes he employed the eclipses of the moon. After having in this mode determined the latitudes and longitudes of a great many places, he proposed to draw up a catalogue of them. This he did not live to accomplish, but his example was followed by succeeding astronomers. He fixed on the Fortunate Islands as the first meridian. He applied his astronomical princi-

ples to one very useful purpose, namely, the projection of the sphere on a plain surface. His treatise on this subject was approved of and consulted by Ptolemy. His catalogue of the fixed stars is preserved in the *Almagest* of Ptolemy, and his commentary on the phenomena of Aratus and the astronomy of Eudoxus is still extant, and was published with a Latin version by Petavius in 1630. He composed a work in several books to correct the errors of Eratosthenes, charged him with many blunders, and absurdly preferred the map of Anaximander to that which he had constructed; reckoning his computation of the earth's circumference to be deficient, he added 25,000 stadia, making one degree nearly 764 stadia, or more than 75 Geo. miles, which, instead of correcting, increased the error of Eratosthenes.

After Hipparchus, followed Artemidorus, an Asiatic Greek, who lived about a century before the Christian era. This personage composed a copious *Periplus* of the Mediterranean, in eleven books, beginning at the Pillars of Hercules. A fragment of this work still remains, containing a detail of places, and of distances in stadia along the coasts of Bithynia, Paphlagonia and part of Pontus, commencing at the temple of Jupiter Urius, on the Thracian Bosphorus, and proceeding eastward. It appears from Diodorus Siculus, Strabo, and Pliny, that Artemidorus treated also of other parts of the earth, and as they seem to have preferred his works before all others in the same line, the loss of them is matter of much regret. Artemidorus has calculated the distance from Cadiz to the mouth of the Ganges, at 68,624 stades, or 8,578 Roman miles, on the parallel described by Eratosthenes, or 5,882 Geo. miles. Now the direct distance is 4,845 Geo. miles, or 1037 such miles less than his estimate. But as road distance between these supposed parallels is evidently intended, if 1-7th be allowed for inflection on this long line of distance, the error will be reduced to 344 Geo. miles. On a second line given by Artemidorus, through Cappadocia, Ephesus, Rome, and Spain, the distance between these two points is made 8,685 Roman miles, or 107 Roman miles more. This clearly shows that the distances across Asia were given by the ancients in road measure, and not in direct measure, and hence the source of these enormous longitudes given by the ancient geographers.

Another Greek geographer, Dionysidorus of Melos, is mentioned by Pliny, who made the semi-diameter of the earth, 42,000 stadia, giving a circumference of 263,894 stades. Consequently he reckoned 733 stades to a degree of a great circle, or about 73 English miles.

About 90 years B. C., Scymnus of Chios composed a geographical treatise in Iambic verse, which he dedicated to Nicomedes, III. king of Bithynia. Of this work 977 verses are extant, and published in the *Minor Geographers* of Hudson, Tom. II. After an introduction of 137 verses, he proceeds to give a superficial description of the coasts of Italy, Greece, and the adjacent islands, Macedonia, Thessaly, Thrace, Moesia, Sarmatia, and the shores of the Euxine. The chief tribes and colonies settled in these parts are enumerated, along with the principal cities. Upon a perusal of this poetico-geographical fragment, no regret can be felt, that the work itself has not survived the wreck of time.

Polybius, the celebrated historian, made some additions to geographical knowledge by his travels and voyages. He surveyed the Alps, in

order to discover the line of Hannibal's route to Italy, a work which he performed with singular success, as has been shown in our note on the line of Hannibal's march. He made a voyage along the Atlantic coast by the orders of Scipio Emilianus, the celebrated conqueror of Carthage, but advanced no farther along the coast than the vicinity of Sierra Leone, and expressed his doubts of the peninsularity of the African continent, a fact previously admitted by Herodotus and Eratosthenes. But so little improved in his day was the geography of Europe, that he says, that the part of Europe beyond Spain, bordered by the exterior sea, (Atlantic) had been but lately discovered, and was possessed by a race of barbarous people; that those parts of Europe lying between Narbonne and the Tanais, (Donets) are also unknown, and that the reports concerning them ought to pass for fable or invention.¹ Polybius, consequently, was ignorant of all the northern and eastern parts of Europe, and in this instance, Herodotus knew more than he. He seems however to have been well acquainted with the geography of Media, and is the first author who has noticed the fact, that the sterile and sandy soil of that country was irrigated by subterraneous canals or khanauts. He is singularly accurate in his estimate of the length of the Mediterranean, which he makes 2,440 Roman, or 2,237 English miles, equal to $39^{\circ} 56'$ degrees of longitude, allowing 56 English miles to a degree in the parallel of 36° N. Lat., or only 93 miles less than the truth, as fixed by astronomical observations.

From the time of Hipparchus to that of Ptolemy, a period of three centuries, the school of Alexandria produced only one geographer, Posidonius, a native of Apamia in Syria, and contemporary with Pompey and Cicero. He usually resided at Rhodes. Not satisfied with the measure of the earth's circumference as determined by Eratosthenes, he set himself to correct the error of that geographer, but adopted a different method of measuring a degree of the meridian. He observed that when the star Canopus became visible in the horizon of Rhodes, it was elevated $7^{\circ} 30'$ above the horizon of Alexandria. He supposed these places to be under the same meridian, and from the reckoning of navigators, he computed the distance to be 5000 stadia, seven degrees thirty minutes, being 1-48th of 360, or of a great circle on the sphere. He determined the circumference of the earth to be 5000 stadia, multiplied by 48 or 240,000 stadia, and one degree to be 666 2-3ds stadia. Allowing 547.2 English feet to the stadium, a degree of 666 2-3ds stadia will contain 69.10 English miles. Notwithstanding the felicity of the result, Posidonius proceeded on erroneous principles. He did not ascertain with precision the distance between Rhodes and Alexandria, but relied on the vague computations of others. He also determined the arch between the zeniths of their places to be 7° degrees, whereas it does not exceed $5^{\circ} 15'$ the latitude of the former being $36^{\circ} 28' 30''$, and that of the latter, $31^{\circ} 13' 5''$. He supposed these places to be under the same meridian, whereas Alexandria is $29^{\circ} 55' 30''$, and Rhodes $27^{\circ} 58' 45''$ east of Greenwich.

According to Strabo, Posidonius computed the distance between Rhodes and Alexandria to be 3,750 stadia, in agreement with the computation of Eratosthenes; and computed the circum-

ference of the earth at 18,000 stadia, thus, 3,750 stadia, multiplied by 48, make 180,000 stadia; and 500 such stadia make a degree of a great circle. Posidonius is quoted as the first geographer who made 500 stadia one degree, and is followed in this by Marinus of Tyre and Ptolemy. Every stadium consisting of 729.6 feet, 500 stadia are equal to 69.10 English miles.

The rising greatness of the Roman power contributed much to the extension of geographical knowledge. The Greeks had little or rather no knowledge of those regions of Europe which lay at a distance from the Mediterranean or Euxine Seas. They had neither pervaded Spain, nor visited Gaul, nor penetrated into Great Britain. Germany was nearly inaccessible, and thinly inhabited by fierce and warlike tribes. But the successive conquests of these countries by the Romans, and especially by Julius Caesar, developed their boundaries, extent, and interior geography. Among the Greeks, Eratosthenes was the first who gave a rude sketch of Britain, but he was ignorant of the existence of Ireland. No notice of Ireland appears in Polybius, a later writer than Eratosthenes. Diodorus Siculus, who was contemporaneous with Julius Caesar, speaking of the Gauls or Celts, and their northern neighbours, says, that they are so fierce and cruel that it is reported that they eat men like the Britons of *Iris*, (or *Irin*, or *Irne*,) so of course the Celts and Irish Britons were cannibals, according to this Sicilian historian. But the greatest part of the civilized world being reduced to the Roman yoke, a survey of the whole Roman empire was decreed by the senate under the consulate of Julius Caesar and Mark Antony, 44 years before Christ. The care of this survey was intrusted to three Greeks, Zenodorus, Theodoros, and Polyclethus. To each of these, a different division of the empire was assigned. Zenodorus finished his survey of the eastern part in 14 years, 6 months, and 9 days. The northern part was completely surveyed by Theodoros in 20 years, 8 months, and 10 days. Polyclethus returned from the south in 25 years, 1 month, and 10 days. This survey is ascribed by Pliny to Agrippa, son-in-law, and prime minister to Augustus Cesar, because it was completed when that minister was in the plenitude of his power.² To this survey were added supplementary surveys of the new provinces as they were successively conquered and added to the empire, and these in *cumulo* formed the basis of the geography of Ptolemy. From these surveys a plan of the empire was formed, containing the distances of places, with descriptions of the sea coasts and interior parts of the countries, and was placed under a grand portico in the middle of the city for public inspection. Every governor of a province was furnished with a map and written description of it, in which, were both given and engraved, the distances of places, the nature and direction of the roads, the courses of the rivers, and the chains of hills and mountains. All the cities of the Roman empire were connected with each other, and with the capital by public roads, which, issuing from the Roman Forum, traversed Italy, pervaded the provinces, and were terminated only by the boundaries of the empire. These roads were carefully marked at every 1000 paces, or 4,840 English feet by milestones, and ran in a direct line from one city to another,

¹ See Hampton's Polybius, B. iii. c. 4.

² B. C. 19. See the Cosmography of Æthicus. p. 107.

In defiance of the obstacles of nature, or the rights of private property. Mountains were perforated, and bold arches thrown over the broadest and most rapid streams. The middle part of the road was raised into a sort of terrace, which commanded a view of the adjacent country. The roads consisted of several strata of sand, gravel, and cement, and were paved with large stones, and in some places near the capital, with granite. Such was the strength and durability of these roads, that they have not yet entirely yielded to the combined effort of sixteen centuries. No country was considered as completely conquered till it had been rendered pervious in every direction to the arms and authority of the victor. Posts were regularly established in all parts of the empire, houses were every where erected at distances of five or six miles, each of which was constantly provided with 40 horses, and by the help of these relays, it was easy to travel 100 miles a day, along the Roman roads. A magistrate of high rank, once posted, in the fifth century, from Antioch to Constantinople, a distance of 725 Roman, or 665 English miles, in 54 days. If a line be drawn from the wall of Antonine, the north-west extremity of the Roman empire, to Rome, and thence to Jerusalem at the south-east point, it will be found that the great chain of communication between these opposite points amounted to 4,080 Roman, or 3,740 English miles. This vast space, surveyed and delineated with an accuracy previously unknown, extended from the Atlantic to the vicinity of the Tigris, and from the wall of Antonine, and the frontiers of Poland, to Mount Atlas, and the tropic of Cancer, comprehending an area of 1,600,000 Geo. square miles. It was from this plan, projected by Julius Cæsar, and completed by Augustus, that the succeeding geographers of ancient days, drew the best and fullest information.

Under the reign of Augustus, flourished the celebrated geographer Strabo.¹ This personage collected a vast fund of geographical knowledge, by reading and travelling, and from this he composed a system of geography in 17 books. He rectified some of the mistakes, and corrected many of the errors of his time. He maintained the globosity of the earth, exploding the generally received opinion, that it was an extended plain, whose boundary supported the canopy of heaven. He also maintained its centripetal force, and laid down rules for constructing globes, but he omitted altogether the mode of fixing the position of places by their latitude or longitude: whether this proceeded from ignorance or neglect it is impossible to say, but the former seems probable. In order to render his geographical work as complete as circumstances would permit, he traversed great part of the Roman empire, travelling from the Euxine south to Egypt and Nubia, and from Armenia westward to Sardinia. He visited most of Roman Asia, Greece, Italy, and the adjacent isles. His knowledge of places which he did not survey, but attempted to describe, was derived from the reports of travellers, and from the geographical works of the time that were most esteemed. He denies in his work that the earth was surrounded by water, according to the opinion of ancient philosophers. Though acquainted with the sphericity of the earth, and the obliquity of the ecliptic, he omits to make the necessary infer-

ences and deductions. He rejects as fabulous the observations and discoveries of Pytheas, and censures Eratosthenes and Hipparchus for crediting and quoting them as authorities. This arose from his belief that the northern regions and the torrid zone were uninhabitable from cold. The ships, says he, that trade from the ports of Gaul, never venture beyond Ireland, as all places in a higher latitude are rendered inaccessible by eternal frost. The portion of the globe which he describes, has the Baltic on the north, the Ganges on the east, the mouth of the Senegal on the south, and Spain on the west. Of the countries which he himself had visited, his descriptions are generally accurate, but his accounts of those he had not visited are frequently erroneous or very incomplete. His information respecting Taprobane, and the countries on the Ganges, seems to have been entirely derived from the materials furnished by the generals of Alexander. All his knowledge of Asia beyond the Euphrates seems to be taken from this source, but there is more information in his book respecting the mouths of the Euphrates and Tigris, and the maritime shores of Susiana, than in all the ancients put together, although his description of these regions be still very confused and inaccurate. He is the only one amongst all the ancients who has accurately described the vale of Merdasht, and the site of Parsagarda, or Persepolis. In Africa his knowledge was vastly inferior to that of Herodotus, being ignorant of its interior. He represents the Caspian Sea as a gulf of the Northern Ocean, on the vague authority of some travellers who had surveyed its western coast to the mouth of the Rha or Volga, in opposition to the more rational statements of Herodotus, and Diodorus Siculus.

Eratosthenes had given a rude idea of the form of Britain, but was ignorant of the existence of Ireland; Strabo knew of the existence of both, but the true form of neither, and erred so much in the position of Ireland, as to place it on the north of Britain, and so distant from it as to occupy the site of the Isles of Faro. He judged it to be very large, but by placing it so wide of its true situation, it may be doubted if the Romans had ever visited it to that time. He represents the inhabitants of Ireland to be completely barbarous, (and they have not yet wholly redeemed their character), and its climate to be such, as to be almost uninhabitable from the intensity of the cold. He was also so ignorant of the coasts of France and Spain, that he had no suspicion of the existence of the Bay of Biscay and the Gulf of Gascony. He limits the breadth of the known world to 38,100 stadia, making it 8000 less than Eratosthenes, who had made it 46,500. Taprobane, or Ceylon, was made by him the southern limit of the habitable world. He places the Borysthenes (Nièper) under the same parallel with Great Britain, though the former be four degrees south of the latter. Marseilles and Byzantium (Constantinople), he places in the same latitude, and reckons the distance between Great Britain and Marseilles equal to that between Byzantium and the Borysthenes, both of which are very erroneous. From the Sacrum Promontorium to the mouth of the Ganges he reckoned 67,500 stadia, instead of 70,000 as made by Eratosthenes, or 2,500 less. If 4,970 Geo. miles be assumed as the real, and 5,591 Geo. miles as the road distance, allowing 1-8th for inflections, the calculation of Strabo will exceed the truth by only 195 Geo. miles;

and if, as Rennel remarks, a greater degree of inflection ought to be allowed, the calculated and the real direct distance will approximate very nearly. His measurement of the length of the Mediterranean is of all the ancients, Polybius excepted, the nearest to the truth. He makes the distance between the Sacrum Promontorium and Issus, 27,500 stadia, which at a mean of 718 stadia, to 1°, amount to 2,300 Geo. or 2,645 English miles in a direct line, or 100 such miles in excess, the direct distance between the two points being $45^{\circ} 24' 54''$, which at the average of 56 English miles to the degree in the parallel of 36° , are equal to 2,540 English miles direct. It must be remarked, however, that Strabo reckoned 700 stadia to a degree of latitude, and 500 to a degree of longitude. In this way, the longitude of Issus from the Promontorium Sacrum, was extended to 55 degrees, or nearly 10 degrees too much, or 540 English miles in the parallel of 36° . It is strange that Rennel who has bestowed such pains on the measures of the ancients, and endeavoured to reconcile these with modern knowledge, has totally overlooked this very obvious difficulty in the measures of Strabo. Had Strabo divided his degrees of longitude by 700, or 718, instead of 500, the error would not have been very great. But as he has expressly assigned 500 stadia to a degree of longitude, it is impossible to conclude otherways than that he has erred prodigiously in the length of the Mediterranean, whether we take these 500 stadia as equal to 56 English miles each, or to a degree of a great circle in the parallel of the equator.

The fact is, he described the several divisions of the globe as he found them delineated on a plain surface, the parallels of longitude and latitude being always at equal distances, and intersecting each other at right angles at Rhodes. His work was never illustrated by maps, and it is difficult to construct one from his description. The two first books of his geography are introductory to the work, unfolding the reasons which induced him to complete his system, namely, the imperfection and inaccuracy of other works on the same subject. He mightily applauds Homer as an excellent geographer, and makes great use of him in the description of the Troade, Greece, and the neighbouring isles, and then inquires into the merits of Eratosthenes, vindicating him in some instances from the censures of Hipparchus, and in others, severely and undeservedly criticising him. Eight books are dedicated to the geography of Europe, six to Asia, and one to Africa. Such are the outlines of this celebrated book, which time has not greatly impaired, during the space of 1800 years, the latter part of the 7th book only being lost. With all its defects and errors however, it is the best geographical production of antiquity.

Dionysius Periegetes, or Dionysius the traveller, flourished in the reign of Augustus, and was nearly contemporaneous with Strabo. He was a native of Charax in Susiana. Having adopted the principles of Eratosthenes, he composed a geographical description of the earth in 1186 elegant verses. Poetry is by no means the best vehicle for conveying geographical instruction, and it is not to be supposed, that much of it will be gained in a short poem. It contains many errors, and is very defective in arrangement, shifting in the true spirit of poetical license from one subject to another, between which no connexion can be traced. His knowledge of Asia is not so extensive as that of Ptolemy, but

he gives a tolerable account of some of its provinces. Europe is described in 300 verses; Italy, Greece, and the adjacent regions are treated with precision and elegance, but his review of the northern regions is superficial and inaccurate. He was employed by Augustus to travel into the east, and explore Armenia. An edition of his geographical poem was published by Dr. Wells, at Oxford, in 1704, and the original work is inserted by Hudson, in his compilation of the Minor Geographers, vol. II. with the commentary of Eustathius.

In the reign of Augustus, the interior of Arabia was explored by Cornelius Galius, and Nubia, by Petronius, which added considerably to the stock of geographical knowledge. In the time of Claudius, Suetonius Paulinus crossed the range of the Atlas, and during the winter, penetrated through the deserts, which are described as formed of black dust, till he reached the Niger. The account of this expedition written by Paulinus himself, is unhappily lost, but it is quoted by Pliny. Britain also was conquered, and explored to the foot of the Grampians, after a war of 40 years, commenced by the most stupid, continued by the most dissolute, and finished by the most timid, of all the Roman emperors, Claudius, Nero, and Domitian. The Island of Taprobane or Ceylon became more fully known to the Romans in the reign of Claudius, in virtue of an accident which befell a Roman freedman who farmed the customs in the Red Sea. This man was blown off the Arabian coast across the ocean to Ceylon, where he was hospitably received and entertained by the king for six months, when he was sent back to Rome with some Ceylonese ambassadors, to solicit an alliance with the Roman sovereign.

In 50, A. D., Pomponius Mela, a native of Spain, published a geography in three books. In the first and second books he fixes the boundaries of Europe, Asia, and Africa, and after enumerating the most considerable nations by which they are inhabited, treats of the countries along the Mediterranean, beginning with Mauritania. In the third book he takes a cursory view of the countries bordering on the Exterior Sea, (Atlantic) beginning with Spain, proceeding northward to the extremities of Scythia, returning thence along the coasts of Asia and of Africa, and terminating his survey at the Pillars of Hercules. His account of the provinces adjacent to the Mediterranean is concise and accurate, but his review of the northern parts of Europe, and of the most distant parts of Asia, is defective and fabulous. He abounds in marvellous stories. Among others, of Indian ants larger than mastiffs, which guard the gold like the Gryphins of Herodotus. This story he borrowed from that historian, but he improved it, for Herodotus said that these ants were of the size of foxes, but Mela has made them as large as the largest sized dog. He repeats the fable of the Phoenix, which Herodotus and others had mentioned before him; and also the absurd story of hairy women called Gorgons, from those Greek authors who had misrepresented or misconceived the account of Hanno. He represents several African tribes as incapable of speech, conversing merely by signs; others as having no tongues, and others as being destitute of lips, having only a small aperture below the nostrils by which they can drink by means of a straw passed through. He supposes a communication between the Caspian Sea and Northern Ocean, apparently mistaking the mouth of the Volga

for that Strait. He divides that Sea into three large bays, the Hyrcanian on the south, the Scythian on the left, and the Caspian on the right. An edition of Pomponius Mela, with copious notes replete with learning and scurrility, was published by Isaac Vossius, and another by James Gronovius, who animadverts with critical severity on the emendations and notes of Vossius.

At the same period with Mela, Isidore of Charax composed a geographical itinerary, a fragment of which, relating to the distances of the most remarkable places within the limits of the Parthian empire, only remains. Itineraries of this sort were anciently in use among the Persians, as we learn from Herodotus. From them the Parthians adopted the idea. Isidore computed the intervals by *schœnes*, between the different *stathmoi* or stations, one of which consisted of 5 Roman miles, or 40 stades. Five of these of 4,840 English feet each mile, are equal to 4 and 583-10ths English miles nearly; and 40 stades of 547.2 feet amount to 4 and 146-10ths English miles: which of these computations should be chosen it is impossible to determine. The fragment of Isidorus, inscribed *Stathmoi Parthikoi*, may be found in the *Minor Geographers of Hudson*, vol. ii. In this fragment the stations from Zeugma on the Euphrates, then the Parthian boundary, to Alexandria, in Arachosia, are traced as follows. From Zeugma, along the Euphrates to Seleucia on the Naharmalcha, 171 *schœnes*; thence ascending the Silla, (Dezallah) to Apollonia, (Shahrevan) 33 *schœnes*; thence north-east through the Caspian Portæ, (Pass of Serdara) to Choareua, (Khawur) 189 *schœnes*; thence to Comisena, (Cumish) 58 *schœnes*; thence to Hycania, 60 *schœnes*; to Astabena, 60 *schœnes*; to Parthiana, 25 *schœnes*; to Margiana, (Marou Shah Jehan) 57 *schœnes*; southward to Aria, (Herant) 30 *schœnes*; to Anabon, 55 *schœnes*; to Alexandria in Arachosia, on the Arachotus, 120 *schœnes*; in all, 858 *schœnes*, or 4,290 Roman miles, or 3,940 English miles. From this itinerary we may infer that the above two points were the western and eastern extremities of the Parthian empire, and that it did not at that period extend farther east than the western slope of the mountains of Afghanistan.

Shortly after the same period, flourished the learned and indefatigable Caius Secundus Plinius. Though he cannot be entitled to the praise of a discoverer in any branch of science, yet with incredible industry, he collected all that was then known respecting the relative situations and distances of places, and published a concise epitome of the whole, in the third, fourth, and fifth books of his *Natural History*. The first, second, and sixth books, contain his geography, strictly speaking. The whole of his work contains 37 books, and is an astonishing proof of what perseverance may accomplish. To use the words of the learned Blackwall: "His *Natural History* is one of the greatest monuments of universal knowledge and unwearied application, now extant in the world." It is in fact an abstract of all the knowledge of natural science that then existed.

Pliny reckoned 700 *stadia*, of 625 Roman, or 605 English feet, to a degree of a great circle. His degree consequently contained 60 and 21-10ths English miles. After examining the accounts of Polybius, Artemidorus, and Agrippa, he assigns the following comparative magnitude to Europe, Asia, and Africa. To the first, one-third, to the

second, one-fourth, and to Africa, one-fifth of the whole. With few exceptions, his geographical knowledge of the east and of the north, those parts of the world with which the ancients were least acquainted, was very inaccurate. He places the source of the Indus in the Paropamisian range, thus identifying it with the river of Ghiznee. He supposes the Ganges to be the north-eastern limit of Asia, and that from it the coast turned to the north, where it was washed by the Sea of Serica, between which and a strait, which he imagined formed a communication from the Caspian to the Scythian Ocean, he admits but a very small space. According to his system the ocean occupied the whole space containing China, and all the intermediate tract, with Soongaria, Mongolia, Mandshuria, and Siberia. He derived his knowledge of India from the journals of Nearchus and Hæton, both of which were then extant, and others of Alexander's officers. He has been charged, notwithstanding, by his hypercritical commentator Salmasius, with confounding the east and the west in his account of India. Respecting Salmasius, we may safely say, that Pliny knew as much of the geography of India, as he, for what did Salmasius or any one else know of the geography of India in 1629, when he published his *Plinian Exercitationes*. India was as much a *terra incognita* then, except a few parts on its coasts, as Africa is at this moment. Respecting the journals of Nearchus, Pliny's account of the distance from the mouth of the Indus, to those of the Euphrates, and Karoon, are transcribed from Eratosthenes, with this difference, that he has turned the stades into Roman miles. Now he allows 2,500 Roman miles, or 20,000 stades between the Indus and Babylon. If 3,296 stades be subtracted for the distance of Babylon from the sea, 16,704 stades, or 2088 Roman miles remain for the distance from the Indus to the Euphrates, along the coast. Now the distance between these points in Maclure's chart, is 1,350 Geo. miles, or 1,740 Roman miles. If one-fifth be allowed for the sinuosities of the coast, (and the most superficial glance will show that it is a very sinuous coast,) then the sum total will be 2088 Roman miles precisely, the number stated by Pliny. His knowledge of Chaldaea and Susiana, and of the lower courses of the Euphrates and Tigris, is deplorably defective, contradictory, and inaccurate. But who are to blame for all this but Nearchus, Onesicritus, Polycletus, and the other officers of Alexander, from whom Pliny, in common with Strabo and others, derived his information. It was a shame for those Greeks who traversed the interior of these regions, not as visitors under jealous restraint, but as conquerors and surveyors, to have furnished the world with no better geographical materials, than what have been communicated by a Diodorus, a Mela, a Strabo, a Pliny, and a Ptolemy.

Respecting India, Pliny has been vindicated by the able and enlightened Rennel, who, in his knowledge of Indian geography, was certainly *instar omnium*. He shows that Pliny knew nearly the form of the Indian Peninsula, and was better acquainted with its shape than Ptolemy. Pliny reckons 3,320 Roman miles between Pattala and the mouth of the Ganges. Now the true measure of these coasts, rejecting the sinuosities, is 40 degrees of a great circle. Now Pliny's calculation is 42 such degrees, or within 1-21st part of the truth. He is the only one of the ancients who has fixed the site

of Palibothra, the famed capital of the Prasi, which he places 425 Roman miles below the confluence of the Ganges and Jmuna, and has given an itinerary of the whole road from Attock to this city, and the mouth of the Ganges. None of the moderns have yet been able to identify its site with that of any modern Hindoo city, or even to say where once it stood, as the capitals of Indian kingdoms have frequently fluctuated, and the nature of the materials of which Indian cities are built, ensures the speedy disappearance of their ruins when once deserted. But modern ignorance cannot be sustained as a just impeachment of ancient knowledge, and unless the numbers in the itinerary of Pliny be corrected, Palibothra occupied the very site which he has assigned it. Strabo says, that ships sailed 6000 stadia up the Ganges, to Palibothra, which at the average of 700 to a degree, only exceeds Pliny's distance between that place and the mouth of the Ganges, by 20 Roman miles, in a distance of 638. Pliny supposed the range of the Taurus to originate on the southwest coast of Asia Minor, and to terminate on the shore of the Mare Eoum or Eastern Sea. In the first part of its majestic course, (towards the west) it is called Imaus, successively Emodus, Paropamisus, Circius, Chambodus, Phaphriades, Chontrus, Origes, Oroandes, Niphates, Taurus. He is the first of the ancients who has assigned the true meaning of the name *Imaus*, saying that in the language of the inhabitants it signifies *Snowy*. He denominates this extensive range the Arbiter of innumerable nations. In lib. vi. c. 2. Pliny commits a prodigious blunder in the breadth of Asia Minor, which he makes only 200 Roman miles, or less than 180 English miles, thus narrowing the Peninsula more than one half of its real width.

His geography of the north is the most full and curious of all antiquity. He gives the circumference of the Euxine shore, from Byzantium to Trapezus, and round the head of that Sea to the Bosphorus, and thence along the northern or European side to Byzantium again, in Roman miles, the number of which he states at 3,203.

He gives a magnificent account of the Danube, which, in agreement with Tacitus, he deduces from the Mons Abnoba, (the Schwarzevald, or Black Forest), and conducts into the Euxine by six vast mouths, so large, that the sea is said to be vanquished for 40 miles, the water being fresh all that distance from the shore. From the boundary of Lycia, round about to the Thracian Bosphorus, he says, that 282 nations inhabited the coast and interior. He estimates the number of tribes and tetrarchies in Galatia, at 195. The coast of the Baltic seems to have been partly known to him, and he particularly mentions an island called Baltea, where amber was found. He supposes the Baltic itself to be connected with the Caspian Sea, and Indian Ocean. He is the first author who mentions Scandinavia, which he represents as an island, the extent of which was not then known, but probably he meant the Peninsula of Schonen in Sweden. Denmark may probably be recognized in the Dunina, of Pliny, and Norway in Nolgen. The whole of his information respecting the north of Germany, seems to be drawn from the expeditions of Varus, Drusus, and Germanicus, to the Visurgis and Albis (Weser and Elbe). He knew more of the situation of Ireland than Strabo, for he places it at no greater distance than 80 M. P. from the Silures (South Wales), or 24

Geo. miles, which, considering circumstances, is a near approximation to truth. In lib. iv. c. 16. he allows 50 M. P., or 40 G. M., between Boulogne and the nearest opposite coast, which space he should have known better. He allows from Agrippa, an extent of 600 M. P. to Ireland, by 300 M. P. of breadth, and 800 for the length of Britain, by the same breadth. Both of these dimensions are over-rated, particularly those of Ireland, whose length hardly exceeds the given breadth. It must be observed, that by Britain, Pliny means England, only. He has given a very interesting, though concise description of the Alps and Appenines.

In the reigns of Hadrian, Antoninus, and Marcus Aurelius, flourished the learned, judicious, and philosophic Arrian, who contributed to the extension of geographical science, by his abstract of the voyage of Nearchus, his account of India, and his Periplus of the Euxine Sea. His geography of India, is taken from Nearchus and Megasthenes, the ambassadors of Seleucus Nicator, and relates chiefly to the northern parts, or those traversed by Alexander; and his catalogue of rivers, most of which are to be found in Pliny, contain only those which disemboque themselves into the Indus or Ganges. Pliny says that 19 large rivers fall into the Indus, and as many into the Ganges, in which he is correct. Arrian's Periplus of the Euxine contains whatever, as governor of Pontus, Arrian had seen from Trapezus to Dioscurias, whatever he had heard from Dioscurias to the Danube, and whatever he knew from the Danube, round about the mouth of the Euxine to Trapezus. There is another Periplus of the Indian Sea, also attributed to Arrian, but Dr. Vincent has proved this to be the work of an earlier writer, and of a merchant. It is vastly superior in merit to the other, and has been discussed in the Supplement to the Chapter on Commerce.

From Trapezus to Dioscurias, Arrian reckons 2,260 stadia; from Sebastopolis to the Cimmerian Bosphorus, 2,800 stadia; thence to Byzantium, 8,250 stadia; from Byzantium to the Parthenius (Bartin See), the common boundary of Bithynia and Paphlagonia, 2,270 stadia; thence to Trapezus, 1805 stadia; in all, 17,385 stadia, or 2,173 1-4th Roman miles, of eight stades to the mile. It is evident on the most superficial inspection, that the numbers are corrupted, as they differ vastly from the distances reported by Eratosthenes, Strabo, and Pliny; and the distance between Byzantium and Trapezus is clearly wrong, being only 4078 stadia, or 510 Roman miles, sailing along the coast, as the real horizontal distance from Constantinople to Trebizond, is 10° 48', which in the latitude of 41°, gave more than 560 English miles, or 610 Roman miles.

Pausanias of Cesarea, in Cappadocia, a learned grammarian, flourished at the same time with Arrian, and was intimately acquainted with the state of geography at that time. He travelled into Greece, Macedonia, Italy, and Asia Minor, diligently remarked whatever was worthy of observation in these countries, and published a detail of his travels. His elaborate description of Greece is still extant in ten books, and has been constantly referred to by every classical traveller, from the days of Spion and Wheeler down to the present day. It has been transcribed from the original Greek, by Taylor, and published at London, but the detail of his other travels is lost, a loss the more to be regretted, as several ancient writers have mentioned it in terms of high approbation.

Marinus of Tyre, who preceded Ptolemy, was distinguished by his geographical knowledge, but he seems, from Ptolemy, to have been a credulous and inaccurate writer. Applying the calculation of Posidonius, he estimated 500 stadia to a degree of a great circle, and determined the Prassum Promontorium of the eastern coast of Africa, and Thule, to be the extreme points of latitude in the known world. Supposing the former to be in 24° S. Lat., and the latter in 63° N. Lat., he made the whole extent of latitude to be 43,500 stadia, or 87 degrees, or 5,220 Geo. miles. In the Periplus of the Indian Sea, Rhapta was the farthest known point to the south, of ancient navigation. But as Marinus mentions Prassum, so far the knowledge of the ancients was extended in his day. According to the most probable opinion, Prassum was seven degrees to the south of Rhapta. Marinus, however, places it 35 degrees south of Rhapta, or 24 degrees beyond the Line. It is strange, if Prassum, or Cape Verd, be so far south, that not a single place is mentioned along the coast, in all that intercepted arch of 35 degrees. Ptolemy however corrects him, and places this cape in 15° $30'$ south, which is precisely the latitude of Moaambique, the last settlement of the Arabs in the following ages; and the Prassum of Marinus, in the position he has assigned it, is the limit of Arabian knowledge on this coast of Africa.

Marinus affirms, as quoted by Ptolemy, that he was possessed of the journals of two expeditions under the command of Septimus Flaccus, and Julius Maternus. The former of these Roman officers set off from Cyrene, and the latter from Leptis, and, according to Marinus, they penetrated through the interior of Africa, to the southward of the Line, as far as a nation they denominated Agisymba. That this nation is very far south, is evident from the report of Flaccus, who says, that the Ethiopians of Agisymba were distant three months' journey to the south of the Garamantes, and these latter were 5,400 stadia, of Marinus, distant from Leptis Magna. According to Maternus, when the king of the Garamantes went to attack the people of Agisymba, he marched four months' journey to the south. Marinus placed Agisymba 24,680 stadia to the south of the Line, or 49 $1\text{-}34$ degrees, as he reckoned 500 stadia to the degree, which he afterwards reduced to 12,000 stadia for inflection, which still placed Agisymba 24° south of the Line, or to the south of Congo, which is notoriously absurd, and is refuted by Ptolemy himself. Besides, the assertion that Garama or Germa is 5,400 stadia to the south of Leptis, is notoriously false, the distance being only 300 Geo. miles, or 2,500 of his stadia from the former to the latter. Marinus placed Agisymba and Prassum Promontorium in the same parallel, so that a line drawn due west from the former would strike the latter. His distances in respect of longitude are equally absurd. He placed Cattigara, the most south-eastern point of the ancient world, 225 degrees, or 15 hours to the east of the Fortunate Islands. He afterwards reduced this longitude to 180 degrees or 12 hours. The distance assigned by him between the Fortunate Islands and Hierapolis, (Manbeg) near the Euphrates, is near 17 degrees too much. But from Hierapolis to the capital of Serica, he calculated the longitudinal distance to be 124 degrees, and 480 stadia, or 62,480 stades. The whole longitude of the habitable world therefore amounted in the same parallel to 196 degrees,

480 stadia of 500 to the degree, or 11,818 Geo. or 13,602 English miles, the distance from the Isle of Ferro to Pekin, supposing this city to be the capital of the Sere. This is a prodigious error, an error of not less than 62° $58'$ of a great circle, or 3,778 Geo. miles too much. Kennel's canon for reconciling the distances given by the ancients with modern knowledge, by supposing that they gave them in road measure, and not in direct distance, will not be of any service here, for allowing 1-8th for inflection, the distance is still 2630 Geo. miles too much. So much for the calculations of Marinus of Tyre, who in one place described the latitude of places by climates or parallels, and in another, the longitudes by horary intervals or meridians. Thus we have seen Eratosthenes condemned by Hipparchus, Hipparchus corrected by Posidonius, Posidonius censured by Marinus, and Marinus, as we shall see, condemned by Ptolemy.

We have now arrived at the name of Ptolemy, by far the most celebrated geographer of antiquity. Both his systems of astronomy and geography stood unimpeached for upwards of 1200 years, and though the system of Copernicus, as confirmed by Newton, and perfected by Laplace, has totally superseded the former of these, yet as a geographer, his name is still respected, and his authority is still revered, even by those who have made the greatest advances in geographical science.

This eminent person lived in the middle of the second century, at Alexandria in Egypt, and taught astronomy at that place. In the application of astronomy to geography, he followed the plan of Hipparchus, principally after comparing it with those of Eratosthenes, and other philosophers. He examined the proportions of the gnomon to its shadow at the times of the equinoxes and solstices, calculated eclipses, investigated the calculations founded on the difference of climate, Roman itineraries, and consulted the reports of travellers and navigators. Materials thus collected with so much care, he reduced into a regular and well connected system, expressing the position of places, not by climates and horary intervals, but by degrees of longitude and latitude, after the manner of Hipparchus. His great work as it has reached us, consists almost of an elementary picture of the earth, (if it may be so called) in which its figure and size, and the positions of places are determined. There is only a very short outline of the division of countries, and it is very seldom that any historical notice is added. It is supposed, however, that in addition to this outline, Ptolemy had added a detailed account of the countries then known, but which is now lost. This is the more to be regretted, as it might have led to a solution of many difficulties in his Asiatic geography, which are justly deemed insuperable. His geography is contained in eight books, and is certainly much more scientific than any prior work on that subject. He calculated the circumference of the globe at 180,000 stadia. The Arabian geographers, who were well acquainted with the measures of Ptolemy, inform us, that 180,000 stades are equal to 8000 farsangs. A parasang or farsang contained 22 $1\text{-}2$ half stades, every one of which comprehended 600 great cubits, of 1,824 English feet each. Hence, the circumference of the earth according to Ptolemy, is 24,873 English miles, and one degree of 540 stades is equal to 69.10 miles, 400 great cubits multiplied by 1,824 foot, make 729.6 feet or one stade, 224 stades make 16,416 feet, or one

farsang, and 8000 farsangs are equal to 131,328,000 feet, equal to 24,873½ miles, 60 of which are equal to one degree, or 69.10 English miles. If with Herodotus and Strabo, the parasang be calculated at 30 stades, each containing 300 great, or 400 common cubits, the result will be precisely the same as above, the common cubit being 1.368 English foot. On the other hand, supposing the parasang to consist of 30 stades, each containing 400 great cubits, the earth's circumference as stated by Ptolemy, will amount to 33,164 miles, and one degree be nearly 92 English miles. Again, if Ptolemy used the stade of 400 great cubits, while Posidonius used that of 400 common cubits, the disagreement between their different computations of 240,000, and 180,000 stades, would be merely apparent, for 180,000 stades of 729.6 feet, are equal to 240,000 stades of 547.2 feet, and 500 of the former, to 666 2-3ds of the latter.

One material improvement made by Ptolemy in geography, was the method of determining longitudes by means of lunar eclipses. Previous to this, the ancients ascertained the distances of places from the first meridian, as, the Fortunate Islands, or the Sacrum Promontorium for instance, either by actual measurement, or by the computations of travellers and navigators. Of these modes, the former one was very limited, and the latter extremely precarious. Though the observations made by Ptolemy for the determination of longitudes were not sufficiently accurate, yet the principle on which he went is just, and has been adopted by modern geographers and navigators. The motion of the earth round its own axis being from west to east, the observation of the moon's disk, at the time of an eclipse, will be soonest observed in places of greatest eastern longitude, and *vice versa*, later as the longitude diminishes, in the proportion of one hour for every 15 degrees. If then, a lunar eclipse be observed, by means of well regulated chronometers in two places of different longitudes, the times of corresponding observations will be found to differ proportionally to the longitudes of these places. But this method of finding longitudes is not sufficiently accurate on several accounts, resulting from the state of the lunar phase at the time of observation and other causes. Ptolemy, however, by these observations chiefly ascertained the longitudes and latitudes of many places with tolerable accuracy. But most of his positions were determined by doubtful computations, and when false or uncertain premises are admitted to be true, erroneous conclusions must certainly follow. Maps for his geography were constructed by Agathodæmon, who lived in the 5th century. These were inserted in some of the oldest printed editions, were afterwards copied by Mercator, and republished by Wetstein, at Amsterdam, in 1730.

Many of Ptolemy's errors must be attributed partly to the ignorance of the age in which he lived, and partly to his own inattention and credulity. Great allowance must be made for errors of the former kind. He is no more to be condemned for such mistakes as originated from the imperfection of his information, than modern geographers are to be censured for their comparative ignorance of Central Asia, or the interior of Africa. But errors respecting those parts of the world successively explored by the Greeks and Romans, or subject to the sway of the imperial purple, are less worthy of excuse, and must be ascribed to his implicit admission of the observations and surveys of others. Ad-

mitting as genuine many doubtful or false computations and measurements, he stamped them with the seal of his authority, and succeeding geographers copied them from one generation to another, down to the conclusion of the last century, and several copy them still. Even the very learned Bochart, that oracle of Biblical geographers, has adopted all the errors of Ptolemy, so far as respected the longitudes and latitudes of the places of Sacred Scripture, whose sites he endeavoured to identify. One instance among many, is the site of ancient Babylon, which he places, in conformity to Ptolemy, in 79° east of the Fortunate Isles, and N. Lat. 35°, or 16° 48' too far east, and 1½ too far north. He also places Ararat and Artaxata to the north of the plain of Shinar, instead of to the north-east. The errors of Ptolemy received additional sanction from his authority, which was deservedly very great. The error of Ptolemy's longitudes chiefly arose from his taking 500 stades for a degree of a great circle, and partly from the vague method of calculating distances, by the estimates of travellers and merchants, and the number of days employed in their journeys by land, and voyages by sea. As he assigned 700 stadia to a degree of latitude, his errors in this respect are not nearly so great. The extreme southern and northern points of his world are the Prassum Promontorium in the Cinnamon country, S. Lat. 15° 30', (15° in my copy) and Thule, in Shetland, 63° 15' N. Lat. Thus the breadth of his world was only 78° 45', or 4,725 Geo. miles. This shows his knowledge of the north of Europe to have been very limited, when it did not ascend beyond the boundary of the Shetland Isles. His knowledge of European and Asiatic Sarmatia was very limited. He indeed describes the course of the Rha or Volga pretty correctly, from the north-east to its most western winding, near the Tanais or Don, and he describes a large river running west from the Hyperborean Mountains, (Werchaturian range) to the Rha, which seems to indicate the Kama or great eastern branch. The Tanais is laid down much more correctly than the course assigned it by Strabo. He seems to have been acquainted with the southern coast of the Baltic, from the southern Dwina to the Cimbrica Chersonesus, but he stretches the Chersonesus 2° too far north, and bends it too far east. He begins his geography with the British Islands. His delineation of South Britain and Ireland comes nearer the truth than any of those assigned by preceding geographers, and of the two, much the nearest to Ireland, the dimensions of which are drawn not far from the truth. England, on the other hand, is made too long and too narrow. Scotland is represented most unaccountably as extending east and west instead of north and south, and the Mull of Galloway is made its most northern point, in direct contradiction to fact, when it is known almost universally to be its most southern point. It is strange that the Egyptian geographer should not have known better, as he lived after the time of Agricola, who had with his victorious legions advanced to the feet of the Grampians, and the Romans had sailed round its most northern point. He is pretty accurate, however, in his location of the different Caledonian tribes, who then inhabited Scotland. Strabo had placed Ireland to the north of Britain, but still in its true latitude, as he placed Britain so much too far south. Ptolemy's map, which

is the first geographical document of that island, places it to the west of Britain, but 5° too far north. Its general shape, rivers, and promontories are tolerably well delineated, and some of his towns may be traced in their present appellations, as Dublin in Eblana, placed by him in $59^{\circ} 30' N.$ Lat. whilst the Rogobdium Promontorium, its most northern point, is placed in $61^{\circ} 30' N.$ Lat. The Firth of Clyde in Scotland, is placed by him in $59^{\circ} 40'$, and Berwick on Tweed, $59^{\circ} 10' N.$ Lat. The Western Isles of Scotland, (the *Æbude Insule*,) are made to run east and west along the north shores of Ireland, and their number is made to consist of only 5, and their latitude 62° north. His knowledge of the Scandinavian Peninsula is extremely imperfect. It is clear that under the name of Scandia, he means what was called Scandinavia, but like all the other ancients who have mentioned it, he divides it into a number of islands. He extends Germany as far east as the Vistula. The form which he assigns to Italy is much further removed from the truth than most of the countries he describes. His error respecting the length of the Mediterranean Sea is enormous, being not less than $6\frac{1}{2}$ $20'$ of longitude, for in his tables of Asia,¹ Issus is placed in $69^{\circ} 20'$ east of the Fortunate Islands, and $64^{\circ} 20'$ east of the Straits of Gibraltar. The only solution of this extraordinary error of longitude is this, that he assumed the computation of Strabo as the real distance in a direct line. Now Strabo had computed the distance from the Sacrum Promontorium to Issus, to be 27,500 stades. Subtract 1,458 stades, the distance of that cape west of the Fretum Gaditanum, the result will be 26,042 stades for the length of the Mediterranean, according to Strabo. Ptolemy taking this for the real direct distance, divided it by 400 stadia to a degree in the parallel of Rhodes.² Now the stadia of Strabo, divided into degrees of 400 each, amount precisely to 65 degrees and 42 stades, or $65^{\circ} 6'$, which is 46 minutes more than the longitude of Issus in his table of Cilicia. He first assumed, next divided, and then found the longitude of Issus to be what he has stated in that table. Had he divided by 700 stadia to the degree, the stades of Strabo, the error would not have amounted to five degrees, the result being only 262 English miles more than the truth. Prodigious however as this error is, making the length of the Mediterranean upwards of 3,600 English miles in the parallel of 36° , it was copied by all the geographers and map makers down to the middle of the 17th century.

The first attempt to rectify the mistake respecting the length of the Mediterranean, was made in 1635, under the auspices of Peireskian. The longitude between Marseilles and Aleppo had been hitherto computed at 45 degrees, or 3 hours; but by observations of a lunar eclipse made at three places on the 27th of August 1635, the differential longitude between these places was found to amount to 30 degrees. By this correction, the longitude of the Mediterranean was reduced 1 hour or 15 degrees. In 1696, M. Chazelles found, by observations of the eclipses

of Jupiter's Satellites, that Scanderoon lies 34° east of Paris, and from Paris to Gibraltar are eight degrees nearly, so that the whole distance is 42 degrees, or 2,352 English miles. A succeeding observer, M. De Lisle, constructed a map of the Mediterranean Sea, the basis of which was partly those observations, and partly actual measurement. In his map, the length of that sea is nearly $45\frac{1}{2}$, or 2,552 English miles, a surprising approximation to Ptolemy, had the scale of his stades been 700 to a degree, the difference being only 40 English miles. But the recent observations of Chazelles have been verified by others more recent, and the distance between Issus and the Strait of Gibraltar has been ascertained to be $41^{\circ} 36'$, or 2,325 English miles.

The longitude of the Euxine was also extended in Ptolemy's tables, 4° beyond the truth. In Asiatic geography, his errors are equally great. The opinion of Herodotus, that the Caspian Sea was a large inland lake, unconnected with any other, but which had been overlooked or disbelieved by succeeding geographers, was justly adopted by Ptolemy, but he totally inverted its form, making it extend from west to east, instead of from south to north. He has prodigiously overrated its length, extending it $23\frac{1}{2}$ of longitude from the mouth of the Cyrus, (Kur) in $79^{\circ} 40' E.$ Long. to those of the Polyimetis, in $103^{\circ} E.$ Long. This extension in the parallel of $45^{\circ} N.$ Lat., gives a length of 1,153 English miles, which multiplied by 5° of medial breadth assigned it by him, make a superficies of 400,000 English miles, or nearly thrice its actual surface. It was one consequence of this enormous error, that the Scythians, and Seres, were placed, the former of which contained many successive tribes, 86° too far east, or 1,800 English miles, for it must be also remarked, that Ptolemy placed the western extremity of the Caspian Sea, 16° too far east in respect of the Fortunate Islands, which, added to 20 degrees which he has assigned to the longitude of the Caspian beyond the truth, make 36° . Had the error died with himself, it would have been of very little consequence, and would merely have remained as a monument of ancient ignorance, known only to the learned. But the growing ignorance of future ages and successive generations prepared the way for the perpetuation of his errors, which like those of the Stagyrte, respecting the immobility of the heavens and the earth, were received with all due submission as indisputable facts, which nothing but presumption could dare to question. Though the error of Ptolemy respecting the Caspian Sea was partly corrected by the oriental geographers, who ascribed an oval form to the Caspian, and made its greatest extension to be from north to south, in agreement with Herodotus, that venerable father of history, and although Ebu Hawkel and Abulfeda distinguished it from the Lake of Aral, which they denominated the Sea of Khowarazm, and conducted the courses of the Oxus and Jaxartes into it, instead of the Caspian, as Ptolemy had done, yet after the revival of letters in Europe, the computation of Ptolemy was adopted. Geographer on geographer in succession copied his maps, and sanctioned his errors, till within the last 100 years, when the truth came out that this geographical oracle had given an erroneous response. Not only these, but such literary giants as Salmasius, Bochart, Vossius, and Cellarius adopted them.

¹ Tab. I. c. 8. p. 124.

² See Ptolemy, Lib. I. c. xi. p. 10, col. 1. *Circumferentiam autem ipsi similem paralleli ejus, qui per Rhodum transit, hoc est, qui ab Equinoctiali abest partibus triginta sex, quadringenta fere comprehendere, nam id quod juxta consentaneam parallelorum rationem, superat, quum in exactiori deprehensione modicum existat, omittendum est.*

Vossius is very angry with Olearius (Elschlager a learned professor of Leipsic, who accompanied the Holstein ambassador to Persia in 1633, and who had himself explored the Caspian Sea from the mouth of the Volga, round about to Ferabad in Mazanderaun, for daring to question the authority of Ptolemy, and the other "knowing ones of antiquity," and for maintaining that the length of the Caspian was from south to north, and not from east to west, as Ptolemy had described it. Anthony Jenkinson had explored its northern shore round about from Astracan, to the mouth of the Yemba, and thence to the Bay of Balkhan, (called Boglatan by Vossius). Now all that was required to ascertain the figure of the Caspian, was merely to explore the space between the bay above mentioned and Ferabad. In spite, however, of both Jenkinson, and Olearius, geographers still adhered to Ptolemy, such is the magic of a great name. I suspect that the foundation of Ptolemy's error lay with Eratosthenes, from whom he seems to have copied his extent and figure of that sea. Eratosthenes assigned it an extent of 12,600 stadia in length, which Pliny converted into Roman miles, according to his usual custom, and Ptolemy into degrees of 500 stadia each, or 25 degrees in whole. Now Ptolemy's degrees come within 750 stades of the computation of Eratosthenes, from which I think it probable that both he and Pliny copied Eratosthenes. It was not till the middle of the last century that the illustrious D'Anville give us the true figure and extent of the Caspian Sea. Ptolemy's account of the rivers that fall into it is singularly confused. Ptolemy's Rhymnus is the Jaik, and his Daix the Yemba, whilst the reverse is the fact, the Rhymnus being clearly the Yemba, and the Daix the Jaik. Instead of making them fall into the Caspian by separate mouths, as is the fact, he makes the Rhymnus and Daix in one place fall into the Kha or Volga, and in another place, he makes the Daix and other streams descend from the mountain Norossus, and join the Jaxartes, which latter he conducts into the Caspian, 5° north of the Oxus, and consequently places its mouth in the position of that of the Yemba. Not a word of Chorasnia, or the modern Khowarzaam, occurs with him, whence it may be inferred that he was quite ignorant of the eastern shores of the Caspian. He conducts the Polytimetus into the Caspian Sea by several mouths, although it never reaches the Caspian by near 500 English miles, but falls into the Oxus, to the south-west of Bochara, being the modern Sogd, which waters the fertile valley of Sogdeana, and washes the vales of Samarcand and Bochara. The real fact is, that from the Attruck to the Yemba, not a single river of consequence falls into the east side of the Caspian.

Another principal feature in Ptolemy's Asiatic geography is his route to the Seres. It must be remarked however, that this route, which makes so conspicuous a figure in his tables, is not the result of his own knowledge, but wholly copied from Marinus of Tyre, who preceded him 60 years, who in his turn declares, that a Macedonian gentleman, called Mares Titianus, the son of a Macedonian merchant, drew up an account of this land route, although he (Mares) relates that he had not gone that route to the Seres, but had only sent some of his factors there. Ptolemy himself remarks that Marinus was by no means disposed to believe the reports of merchants, declaring that he had learned so much from tra-

velling merchants, as to perceive, that, wholly immersed in the pursuit of gain, they were quite careless about investigating truth, and too frequently with an air of boasting arrogance, over-rated the distance of their journales. Therefore, says Ptolemy, concerning that route of seven months, (from the Stone Castle, to the capital of the Seres) there seems to be nothing else worthy of being told in the relation of their adventures, than how great it was estimated by those who had accomplished it, as if there was something wonderful on account of the length of time consumed in the journey.¹ On such information, however, such as it is, Ptolemy constructed his geographical tables and descriptions of Scythia extra Imaum, and Serica. The route commenced at the Bay of Issus, in Cilicia, the most easterly point of the Mediterranean. It then went across Syria, to the pass of the Euphrates, a little beyond Hierapolis, in 72° E. Long., by Ptolemy's tables. It then crossed Mesopotamia to the Tigris. Thence it went through the Garamians of Assyria, (the district of Kourma) and then crossed the range of Zagros, at the pass of Karius, (Korund.) After this, it went by Ecbatana, (Hamadan) through Media to the Caspian Porte, (Pass of Sirdara.) Thence through Parthia to Hecatompylos, (Damghaun;) thence to Hyrcania Civitas, (Jorjaun or Corang;) thence through Aria, (Herat) turning south-east, and then north-east to Margiana Antiochia, (Marou Shah Jehan,) on the Morgus, or (Morgaub;) thence east through Bactriana, to Bactra, (Balk;) thence north to the ascent of the mountainous region of the Comedi, (Mountains of Badakshaun;) thence through the mountainous region above mentioned, south-east to the valley of the Comedi; and thence north-east to the Stone Castle, which receives them ascending the valley, after an ascent of 50 schœnes. Here, according to Marinus, an angle is formed by the junction of two ranges of mountains, the intervening valley being that of the Comedi, namely, the Imaus, rising from the Palimbroti to the north, (or the Imaus versus ad Arctos of Ptolemy himself, or the mountains of the Comedi passed in the route,) and the range running east from the Imaus, beyond which at the northern foot is the Stone Castle, or rather perhaps near the head of the Pass, through that range. This Stone Castle was the station of those merchants who traded directly with the Seres or Chinese. Thence, continues Marinus, was a journey of seven months to the capital of the Seres, or a distance of 36,200 stades, or 72° 200 stades, of 500 each, and as these were degrees of a great circle, the direct distance was equal to 4,344 Geo. or upwards of 5000 English miles. As it is plain on the most superficial inspection, that the route from Hecatompylos to the Stone Castle was very circuitous, as Ptolemy himself remarks, he has accordingly diminished the distance to 24,000 stades, or 60 degrees, of 400 stades each, instead of 500 as Marinus had done; and from the Stone Castle to the capital of the Seres, he has reduced the distance to one half the number of stades, for another reason, namely, that the merchants in their route to the capital of the Seres, from that point, were subjected to most violent storms.² This reduced distance he

¹ Geogr. lib. i. c. 11. p. 10.

² Vis autem quæ est a turri lapidea ad Seras usque, vehementissimis obnoxia est tempestatibus, Lib. i. c. x. col. 2. p. 10.

has made 45½ of 400 stades each, as before. So that the whole distance from the Pass of the Euphrates to the capital of the Seres, is stated by him to be 105½, which added to 72½, the longitude of that Pass from the Fortunate Isles, makes the longitude of that capital 177° 15', as stated in his tables;¹ but 179° 5' in the tables of longitudes and latitudes appended to his work.² Yet he makes the longitude of the Stone Castle 135° east, which is only 42° west of the Serican capital, instead of 45° 15', as he had stated in his first book, or 44° 5' at the utmost, if that capital be placed 7 hours 55 minutes east of Alexandria, or 118° 45' east of that city. Whether these inconsistent numbers are to be imputed to the errors of transcribers or to Ptolemy himself, is impossible to determine. It is certain that the distance of the Stone Castle from the capital of the Seres is merely computed; and as Ptolemy has founded his table of longitudes in Scythia and Serica entirely on computation, he might hesitate as to the precise degree of reduction to direct distance of the space traversed. But if he has reduced the space between these two points to 18,100 stades, instead of 36,200, as stated by Marinus, he has at the same time increased the number of degrees, and of course the distance, by allowing 400 stades to a degree, instead of 500, the calculation of Marinus. Had he divided by 500, instead of 400, the distance would only have been 36 degrees and one-fifth, or 2,172 Geo. miles, but which he has increased to 2,715 Geo., or 3,130 English miles; and if Pekin be identical with Sera Metropolis, it is still 43 degrees too far east of the Canaries, or 2,280 English miles in the parallel of 40° north latitude.

But it will be asked, where is the Pyrgos Lithinos, Turris Lapidea, or Stone Castle of Marinus and Ptolemy. To this query no modern geographer down to Mr. Murray has been yet able to give any thing like a satisfactory answer. It has been the very opprobrium of modern geography, and still remains as much unknown as the *conditu capita Nili*, the hidden sources of the Nile. The reason is obvious, from the fact that we are as little acquainted with the route from Bactria to the confines of China as Marinus or Ptolemy. Our maps of that intervening space are entirely grounded on report, and on the printed routes of Marco Polo and Father Goetz, who travelled that way to Cambalu or Pekin, the former nigh six, and the latter more than two centuries ago. D'Anville, in his Ancient Geography, has endeavoured to identify the Stone Castle with the fortress of Antas, in the district of Kokun, situated on a steep rock, more than 7° to the north-west of Cashgar, and to the west of the Beloor Tag. Gosselin, in a memoir printed in the 49th volume of the *Mém. de l'Acad. des Inscr. &c.* 1803, could discover no signs of the Stone Castle in these Scythian solitudes, but imagined it to be a *mountain resembling a castle*. Hager, in a dissertation on the Lithinos Pyrgos of Ptolemy, printed at Milan in 1816, and in a previous memoir on Chinese coins, printed in 1805, maintains, that the modern Tashkunt, to the north of the Jaxartes, is the Stone Castle of Ptolemy, and endeavours to prove it from the meaning of the word, which in Turkish (the spoken language of Bucharia) means the Stone Castle, and from the known fact, that Tashkunt has been from immemorial time a caravan route from Bucharia

to China; and finally, from the striking coincidence between the latitude of the Stone Castle in Ptolemy's tables and that of Tashkunt, both being in lat. 43° north. As a farther confirmation of his opinion, he adduces the authority of an old and valuable MS. of the 15th century, preserved in the royal library of Brera, a parchment volume, with illuminated titles, margins, and maps, embellished with azure, purple, and gold, comprising the Geography of Berlinghieri, a noble Florentine who described in verse the terraqueous globe. The 7th map given in this volume places under the 43d degree of latitude the *Torre Lapida*, or Stone Castle, exactly agreeing with the position assigned to it by Ptolemy. Malte Brun, in the first part of his Geography,³ adopted the opinion of Hager, that Tashkunt is the Stone Castle of Ptolemy, and quotes his treatise on Chinese coins in proof of it. Mr. Murray, who, in opposition to D'Anville, Gosselin, Pinkerton, Robertson, and Malte Brun, maintains that Serica is China, and that Sera Metropolis is Tsinan-fu in Shantung, denies that Tashkunt is the Stone Castle of Ptolemy, and maintains that the route from Bactria to the Seres went north-east, up the vale of the Oxus, ascending the Beloor-Taugh, apparently as laid down in Elphinstone's map, then descended into a plain abundant in pasture, but not arable, (the plain of Pamer,) then ascended a valley, probably that of Ladauk, to the Stone Castle, a great rendezvous for caravans, (though this singular appellation has never yet been explained,) situated, most probably, on a lofty ridge running north and south, and separating Little Tibet from Great Tibet. This ridge, and not the Beloor-Taugh, he considers as the Imaus versus ad Arctos. From this point, their route to the country of the Seres occupied seven months, a period which, allowing for the slowness of their progress, as well as some exaggeration, was amply sufficient to bring them to the heart of China, but inconsistent with any hypothesis which makes the Seres the Little Bucharia, or the two Tibets the north of India, or a country made up of them, or of portions of them. Little Tibet he makes *Scythia intra Imaus* and Great Tibet, *Scythia extra Imaus*.⁴ From what has been thus stated, it will be easily seen how difficult it is to ascertain the eastern limit of ancient geographical knowledge, when the most able geographers are unable to ascertain the site of the Stone Castle, and the position of the Seres.

None of the positions of the Stone Castle, assigned by the geographers above mentioned, is at all satisfactory. That which makes Tashkunt the Stone Castle or halting place of the caravans, because the name and situation of that place agree with Ptolemy, proves too much, and therefore proves nothing; for it takes for granted, that the appellation can agree only to that single city, and assumes, besides, that Ptolemy's latitude of the Stone Castle is correct. Many other places might have the same appellation as that mentioned by Ptolemy, for undoubtedly there would be many Stone Castles in the route from Bactria to the Seres. Marco Polo, in his route through the extensive district of Badakshan, passed many towns and castles all dependant on the sovereign of that region. Balk and Tashkunt (Bactria and the Stone Castle, according to Hager and Malte Brun) lie

¹ Tab. viii. Asiae, B. xvi. p. 158. ² Tab. viii. p. 23.

³ Lib. vi. Tab. Asiae, vii. p. 155, col. 2.

⁴ Page 123, French Edition.

⁵ See also Murray's History of Discoveries and Travels in Asia, vol. i. p. 455.

north and south of each other, being in nearly the same meridian. Now, according to this theory, the route, instead of being first east, then north, then south-east, and then north-east, as in Ptolemy, is wholly north, Tashkunt being about 490 English miles north of Balk, in direct distance. In this route, they would have both the Oxus and Jaxartes to cross, besides many other large streams. The mountainous region and valley of the Comedi were to be crossed in the way to the Stone Castle. Now, these must lie in the way from Balk to Tashkunt, or be placed in Sogdiana, thus identifying them with the Zarea of Ebn Haukel and the Ak-Tau, or the White Mountains, a thing wholly inadmissible, as no one ever thought of placing the mountainous region of the Comedi in Sogdiana, in direct contradiction to Ptolemy, who places them amongst the Sacæ, an extensive region wholly distinct from Sogdiana, and to the east and south-east of it. He extends this region from the bend of the Jaxartes, on the north-west, to the Imaus, on the south-east, or from long. 125° to 145°, and from 49° to 35° north lat. The Comedian Mountains, with him, extend from the sources of the Jaxartes, the Demus, and the Bascatis, on the north, to the Hindoo-Kho; on the south and south-west, where they meet the mountains of the Lambate, coming from the west, and which are included under the generic appellation of *Imaus*, and to the range that borders the Indus, in its upper course from Ladauk to Attock, on the south-east. The region of the Sacæ, in fact, included what is called Little Tibet, denominated in Persic Baltistaun, and in Sanscrit Baladeshan, clearly corresponding to the Blytæ of Ptolemy. The Sacæ, besides, are said by Ptolemy to be a race of wandering Scythians, who have neither cities nor fixed habitations, but inhabit caves and forests. But if Tashkunt be the Stone Castle, then the route from Balk to that place was through a country abounding in cities, a well cultivated region; a description and route quite at variance with Ptolemy, who delineates the route as through a region of mountains possessed by wandering tribes. I therefore assent so far to the opinion of Mr. Murray, in thinking, that after leaving Bactria they ascended the Beloor-Taugh, or south-west side of the Comedian Mountains, and went up the valley of the Oxus to its source, as laid down in Elphinstone's map, and then crossing the dividing line to the north-east, arrived at the high elevated upland of Pamer, as laid down in Strahlenberg, which upland, or Oropedion, I take to be the valley of the Comedi, and so called because it lay between the two converging ranges of the Beloor-Taugh and the Mooz-Taugh, which, by their junction at the north-west, form the angles described by Ptolemy, (*a qua montes, qui ad ortum tendunt*), namely, the Mooz-Taugh (*monti conjuncti Inao qui a Palembrotia insurgit ad Aretos*), namely, the Beloor-Taugh coming from the south. Crossing this upland to the north-east, this route conjoins another coming north from the range that parts the sources of the river of Kashkhaur from this same extended upland, at the lake of Surrikol, (the lake, perhaps, seen by Marco Polo in his route.) Beyond this, is the Pass of Chiltung, across the Mooz-Taugh, into the country of Cashgar, beyond the Imaus. Near this I would place the Stone Castle, where the merchants, according to Ptolemy, halted, previous to their crossing the Imaus into Scythia and Serica. As this place is the junction of two

caravan routes, the one from Bactria, mentioned above, and the other from India on the south, it may well be called *receptaculum eorum qui ad Seras negotii causa profisciscuntur, penes Montem Inaum*. What adds more to this conjecture is, that a station near this place is called Ak-Tash, or the White Stone, or probably the Castle or Building of White Stone, and on the other side of the Imaus, near the mouths of the pass, is another station marked in the map of Elphinstone, simply called Tash, or the Stone.

Further, the route from India up the valley of the Kashkhaur river, is practicable even for camels. The merchants would have to halt for the purpose of procuring guides and proper equipment for passing this tremendous range. The cold and desolation to be endured and seen in passing it are fearful. Izzett Oollah, who crossed this range, several degrees east of this pass, took two days to cross it, and during that time he and his fellow-travellers were seized with giddiness, vomiting, and asthma. Another reason for halting, would be the well known and long established practice of the Seres, or Chinese, of examining all travellers and caravans, from whatever country they come. For this purpose, custom-house posts, called *Ortongs*, are established on the western frontiers of Chinese Tartary, and, indeed, on every point where the Chinese dominions can be entered. Whenever a caravan arrives at the *ortong*, or custom-house, all the packages liable to duty are examined, registered and sealed up, an inventory of such as are liable being taken. At these custom-houses is a guard of from 15 to 20 Chinese, commanded by an officer, who has the charge of examining the goods. Next day, the caravan is accompanied by a Chinese officer on horseback, and two respectable natives of the country all the way to Cashgar, and thence to the custom-house at Yarkund, where the goods are locked up till next day, when the commandant of the *ortong* arrives, when the goods are compared with the inventory taken at the *ortong* by the commandant, and the duties levied. Now, such a custom-house, or *ortong*, established at the passes leading into Chinese Tartary, exactly corresponds to the halting-place of the merchants, called by Ptolemy, the Lithinos Pyrgos, or Stone Castle, where they would have to stop, and be examined, before they could be permitted to cross the Imaus, and proceed to China. I, therefore, would place the Stone Castle at the entrance of the pass of Chiltung, on the western foot of the Imaus, (*penes Montem Inaum*), an expression this, which will not at all suit the position of Tashkunt, which, though placed by the Jesuit missionaries, D'Arocha, Espinha, and Hallerstein, who accompanied the Chinese general in his conquest of Little Bucharla, in 1759, near five degrees farther east than in the maps of D'Anville and Rennel, is still several degrees west of the Imaus, and cannot, therefore, be said to be *penes montem Inaum*, or under Imaus.

Further, Ptolemy, in his description of Scythia extra Inaum, particularly the tribes who roam in its wide expanse, mentions the Abil as the most northern, next the Hippophagi, or Horse-eaters, then the region of Auxaciti, (the district of Ak-Soo, or the White River,) and then south of this, near the Stone Castle (*et sub hac etiam juxta præfatum receptaculum*) the regio Casia or Cashgar. After which is the

Chatæ Scythæ (the district of Khotan), next, the regio Achassa, and behind this, nigh the Emodian Mountains, the Chauranei Scythæ. Here a line of tribes is drawn from north-west to south-east, from the Abili to the Chauranei. It is true, Ptolemy is not correct in his position of the Casia regio, in respect of Auxacitis, for the former lies south-west, instead of south-east, from the latter. But on the other hand, the Casia regio, the Chatæ Scythæ, and the Chauranei Scythæ, follow each other in a north-west and south-east direction, the Chatæ Scythæ lying to the south-east of the Casia regio and the Chauranei Scythæ, to the south-east of the Chatæ Scythæ, corresponding successively to the regions of Cashgar, Khotan, and Kaira or Kerija. Therefore, since the region of Cashgar is south-west of Ak-Soo, and north-west of Khotan, and is placed by Ptolemy in the vicinity of, or is in other words, the nearest part of Scythia extra Imaum, to the Stone Castle or pass over the Imaus, this latter cannot be Tashkunt, which is $3^{\circ} 41'$ north, and $5^{\circ} 8'$ to the west of Cashgar. Besides, as Ptolemy has placed the Stone Castle 10° east of the sources of the Jaxartes, how came Hager and Maite Brun so positively to contradict Ptolemy, by identifying it with Tashkunt on the Jaxartes, itself a city several hundred miles north-west of the source of the Jaxartes. If, in these gentlemen's opinion, Ptolemy was correct in his latitude of the Stone Castle, why was he deceived so far out of his longitude, as to place Tashkunt 10° east of the source of the river on which it stands. As Cashgar is placed in $39^{\circ} 25'$ north lat. and $74^{\circ} 2'$ east long. (76° according to Klaproth, who has taken it from the same authorities as those given in the General History of China; so that there must be some error of the press, either in Klaproth, or in that work, as there is a difference of 2° of longitude between the one account and the other. I am rather disposed to think that 76° , and not 74° , is the true longitude), and Tashkunt in $68^{\circ} 54'$ east long., and $43^{\circ} 8'$ by the same authority, it is absurd to suppose that the caravan route led from Balk to Tashkunt, and then turned south-east all the way to Cashgar, as it makes a prodigious detour in the way, to go to Cashgar by Tashkunt from Balk, instead of going the obvious route of the valley of the Upper Oxus and the Beloor-Taugh. The route assigned by Ptolemy seems to be the very same as that travelled by Marco Polo and Father Goez. The account given by the former of his route through the Beloor-Taugh to Cashgar exactly accords with Ptolemy's description of the region and the people, the former being mountainous and the latter savage. "The Sacæ," says Ptolemy, "have no cities, but dwell in forests and caverns." The caravan, of course, must carry their provisions along with them, as nothing can be obtained among barren mountains and savage people. "For twelve days," says Marco Polo, "the course is along this elevated plain, which is named Pamer; and as during all that time you do not meet with any habitation, it is necessary to make provision at the outset accordingly."—"After travelling twelve days in this direction (east-north-east) you have still 40 days to travel in the same direction, over mountains and through valleys in perpetual succession, passing many rivers and desert tracts, without being able to see any habitations or the appearance of verdure."¹ Could any description better

agree to the mountainous region of the Comedi, and the want of habitations, than the above? "Even amidst the highest of these mountains," continues he, "there lives a tribe of savage, ill-disposed, and idolatrous people, who subsist on the animals they can destroy, and clothe themselves with the skins." Now, independent of the fact, that Tashkunt is to the north of the Jaxartes, and quite out of the way from Bactria to China, this description neither suits the regions nor the people of Bactriana and Sogdiana, both being full of populous cities and villages. The Sacæ of Ptolemy is the Sakita of Edrisi. The Sacæ, says the former, are bounded on the west by the Sogdians; and, says the latter, the countries of Wakhan and Sakita, border on those of Wakhash and Gil in Mawaralnahr (Sogdiana). He makes Wakhan and Sakita the western part of Tobbat (Tibet) which he extends as far as China to the east. Now, Ptolemy includes Baltistaun, or Little Tibet, in the region of the Sacæ. Having enumerated the various tribes of the Sacæ, as the Caratæ, Comari, Masageti, Comedi, Grynæi, and Toornæ, he concludes the list with the Byltæ. *Sub quibus, juxta Montem Imaum, Byltæ.* But of Great Tibet both he and Edrisi are equally ignorant. In the journal of the route of Father Goez, who went in 1683, to China, by this way, we are informed that, in order to escape discovery, he changed his name to Abdallah, and assumed the habit of an Armenian, and, in company with 500 persons, went from Lahore to Attock, and thence to Caubul, and crossed the Hindoo-Kho, to the north of Purwan, which occupied 20 days. After arriving at Talcan, they struck away east through the Beloor-Taugh, which they took 20 days to cross. Two days after this, they came to the foot of a mountain, called Cerialath (the Imaus, or Mooz-Taugh), which occupied them six days in crossing, amidst snow, during which many of his companions perished. After crossing this range, they came, in 15 days, to Jaconich, and in five more, arrived at Yarkund. Now, this is just the Pass of Chiltung, at the foot of which I have placed the Stone Castle. Beyond the termination of this pass, on the other side of the range, the road divides, the one on the left hand leading north to Cashgar, and that on the right hand north-east to Yarkund.

In Mr. Murray's opinion, the route of the caravans to the Stone Castle, and thence to the Seres, lay up the valley of the Oxus, and then descended into the plain of Pamer, but instead of making them cross the plain as above shown, to the Stone Castle at the foot of the Pass of Chiltung, and then ascending this pass through the Mooz-Taugh, he makes them descend the plain of Pamer to the Indus, at Ladakh, and then ascend the valley of Ladakh to the Stone Castle, which he places at the ridge which shuts in the valley and Lake of Mansarowar, on the south-east, and which, after running north-west, under the appellation of Kentaisse and Caflus, to the north-east of the Lakes Mansarowar and Rawanhrat, turns to the north and north-east, passing to the east of the source of the Indus, till it joins the Mooz-Taugh in east longitude 81° . This lateral ridge running south and north, and connecting the Great Himalaya with its perhaps still mightier rival the Mooz-Taugh, and dividing Great Tibet from Little Tibet, he considers as the Imaus versus ad Aretos of Ptolemy, and places the Stone Castle at the western declivity of this connecting ridge, near the source of the Indus. Little Tibet, accord-

¹ P. 130. Ed. Marsden.

ing to him, is the *Scythia intra Imaum*, the *Saca of Ptolemy*, and Great Tibet the *Scythia extra Imaum*. To this opinion I cannot assent, as it makes the caravans descend the Shanyook, or north-west branch of the Indus, through an excessively rugged and mountainous country all the way, south-east to Ladauk, 50 east, and 40 south of the source of the Oxus, a most prodigious and unnecessary detour, and then ascend east and south-east up the course of the Upper Indus to its eastern source, at least other 40 farther east, and probably 20 farther south, before they arrive at the Stone Castle, a still greater detour. Such a route as this is the most devious possible, and through the most mountainous and inhospitable region in nature, and the most difficult of all the routes that could have been chosen, being only practicable for a short space in the summer months. Murray is mistaken in affirming, in direct opposition to Ptolemy, that the region of the *Saca* is *Scythia intra Imaum*. Ptolemy, in his 13th chapter, expressly distinguishes the *Saca* from both the *Scythias*, as neither belonging to the one nor to the other, having the *Sogdians* on the west, the *Imaus*, or *Heemalleh*, on the south; the *Upper Jaxartes* on the north; and *Scythia extra Imaum* on the east. In his 14th chapter, he says, as expressly as words can do it, that *Scythia intra Imaum*, is bounded on the south and also on the east by the *Saca*, *Sogdiana*, and *Margiana*. He says also, in the same chapter, that *Scythia intra Imaum* is bounded on the east by a line running north from the Stone Castle along the *Imaus* versus *ad Arcetos*, to the *Terra Incognita*. In the 15th chapter, he says, that *Scythia extra Imaum* is bounded on the west by *Interior Scythia* and the *Saca* along the whole range, turning to the north. Any reader of plain understanding will see from these expressions, that the region of the *Saca* was distinct from both the *Scythias* in the geographical classification of Ptolemy. Whether Ptolemy be right or wrong in classing the region of the *Saca* as above, is not at present the question; but it is as certain as his words can make it, that the region of the *Saca*, or Little Tibet, as Mr. Murray chooses to denominate its modern appellation, is not *Scythia intra Imaum*, and consequently, Great Tibet is not his *Scythia extra Imaum*.

Farther, Ptolemy says that the region of *Casia* immediately adjoins the Stone Castle. Now, it is incontrovertible, that the district of *Cashgar* is his *Casia* regio; and equally so, that it immediately adjoins the *Beloar Taugh* or the *Imaus* versus *ad Arcetos*, on the west. The route, therefore, to the *Seres* lay through the *Casia Regio*, or *Cashgar*. The Stone Castle, therefore, must have been on the western declivity of the range separating the *Regio Casia*, or *Cashgar*, from the valley of the *Comedi*, or intermediate high level between the *Mooz-Taugh* and *Beloar Taugh*, to the south-east of the angle formed by their junction. Now, this is in direct opposition to the theory of Mr. Murray, which places the Pass of the Stone Castle at the connecting range at the source of the Indus, between the *Mooz-Taugh* and the *Heemalleh*, 50, at least, farther east, and as many farther south; for if the route lay in this direction, then the caravans entered *Scythia extra Imaum*, not by the *Casia* regio, or kingdom of *Cashgar*, but by the region of the *Chauranei*, or the *Chatæ*, or by an intermediate pass. Now, Ptolemy places the *Chatæ* to the south (south-east) of the *Casia* regio, and the

Chauranei to the south-east of the *Chatæ*; and therefore, if I understand Ptolemy aright, the Stone Castle cannot have been in the vicinity either of the *Chatæ* (*Khoten*) or the *Chauranei* (*Karia*) *Khoten* being 15 days' journey of the caravans south-east of *Cashgar*. For these reasons, I cannot assent to the theory of Mr. Murray, which places the Stone Castle at the head of the valley of *Ladauk*. As the route was first to the east of *Bactria*, and then to the north and north-east, to the source of the *Oxus*, it is much more rational to think that it went thence across the dividing range, and the elevated upland of *Pamer*, to the Pass of *Chiltung*, at the foot of the *Mooz-Taugh*, than in the way he has represented it. I have no difficulty in believing that the capital of the *Seres*, or *Pekin*, or *Tsinanfu*, in *Shantung*, as Mr. Murray thinks, was a journey of seven months from the Stone Castle. According to *Sherfeddin*, in his life of *Timoor Bek*, *Khotan* is 157 days' journey from *Cambalu* (*Pekin*) and *Khoten* is 15 days' journey south-east of *Cashgar*, making a total of 172 days' by the caravan. According to *Father Goez*, it took him and his fellow-travellers 28 days' journey, from the eastern foot of the *Beloar-Taugh*, across the *Imaus* to *Yarkund*. Now, *Yarkund* is eight days' journey north-west of *Khoten*. If these 36 days be added to the 157 of *Sherfeddin*, it will make a total of 193 days, from the Stone Castle at the foot of the *Chiltung* Pass to *Pekin*; and if *Sera Metropolis* be *Tsinan-fu* in *Shantung*, the capital of *China* in the days of *Marinus*, it will be increased 12 days more, or 205 days in whole, or more than seven months. The distance from the Pass of *Chiltung* to *Pekin* is at least 430 of longitude, or 2260 English miles in direct distance, in the parallel of 40° north latitude. If seven lunar months, or 196 days, be allowed to travel the intermediate distance, the daily average of the caravan route will be more than 11 English miles of direct distance. If one-third be allowed for windings, and less can hardly be allowed on so long a line, the daily average will be more than 13 English road miles. To this must be added what Ptolemy observes, that the route from the Stone Castle to the *Seres* is subjected to most boisterous storms. The distance between these two points Ptolemy made 450 of a great circle, or more than 3,100 English miles direct distance, which exceeds the real distance by 874 English miles, or 17½ more than the truth, in the parallel of 40° north latitude. If placed where Mr. Murray would fix it, the error would be increased to about 250 of longitude.

That the Stone Castle was an *ortong*, or custom-house, placed at the junction of the two routes, from *Bactria* and *India*, near the foot of the Pass of *Chiltung*, appears probable, from the additional circumstance, that at that time the Chinese were possessed, as they are at present, of *Scythia extra Imaum*, and consequently of *Cashgar*, or the *Casia* regio. This event took place in the reign of the emperor *Hyau Hoti*, more than 70 years before the era of Ptolemy. Under the auspices of his victorious general *Tewhyen* or *Panchin*, the Huns had been completely driven from *Mongolia* and *Soongaria*. This successful warrior carried his conquering standards to the vicinity of *Badakshan*, in *Bactria*, and the region of the *Saca*. From the moment, therefore, that the merchants arrived at the western frontier of *Cashgar*, marked by the Stone Castle or *ortong*, they would be necessitated to halt for the purpose of having their goods and

their persons examined, by a people who have ever been jealous of foreigners. It may also be remarked, that from the moment the Chinese became possessed of Eastern Scythia, the road was rendered safe for caravans, which could not possibly be so under the dominion of the Huns, or any tribe of roving plundering Scythians. At this very present time, since the conquest of Cashgar by the Chinese, so admirable is the police on the road to China, that, according to Mr. Fraser's information, a child may travel with a purse of gold in its hand, without fear or risk. Therefore, it was owing to the event above narrated, that the Romans had any knowledge of, or communication with the Seres or Chinese, and that Ptolemy was enabled to give any account of Scythia extra Imaum and Serica.

Having thus endeavoured to settle the position of Ptolemy's Lithinos Pyrgos, or Stone Castle, from such scanty materials as we could glean, for on this subject nothing else can be got, the next question is, How far did the knowledge of Ptolemy extend eastward? or, in other words, Who were the Seres, and what was the Serica of Ptolemy? Although the generality of the learned have been of opinion that the Seres are the Chinese, yet almost all our modern geographers, as Strahlenberg, D'Anville, Gosselin, Rennel, Pinkerton, Dr. Robertson, and Malte Brun, deny that the Seres and Chinese are the same people, and that Serica is China, and Cellarius leaves the question as he found it. If you ask at these gentlemen, where is Serica, they are quite at a loss for an answer. For instance, Strahlenberg tells us, that the Seres are the Bucharian Tartars, and that Serica is the kingdom of Cashgar, or the Lesser Bucharja. Nay, he denies that the Seres were a distinct nation at all, and that the name is an appellation bestowed on them by the Usbeck Tartars, because they were citizens and merchants who dwelt in towns, and carried on trade, in opposition to themselves, who dwelt in tents, and fed cattle; and that these Seres are people who follow the mercantile profession in the three regions of China, Cashgar, and the Greater Bucharja; and that it is quite wrong to class the Seres as a distinct nation at all. Ptolemy, consequently, was entirely wrong when he classed them as a distinct people from the Scythians, and their country as a different region from Scythia. If you ask at Strahlenberg, is not the city of Ottorocorra (the Attacoras of Pliny) in Serica, and therefore inhabited by the Seres; he will tell you, that Ptolemy is totally wrong in placing it in Serica, near the confines of China. He says, that it is the same with the modern Otrar, in Turkistan, on the Jaxartes, where Tamerlane died, and that Ptolemy has quite misled those who have followed his tables, as Cellarius and Hornius, who have joined the Ottorocoran Mountains to the Chinese or Serican Mountains. Thus, from similarity of sound, Strahlenberg has inferred identity of place. As to D'Anville, it appears that he could make very little of the subject; and who indeed can, from Ptolemy's very limited description of Serica. Serica, however, in his opinion, is not China, but the eastern part of the Lesser Bucharja, the Great Desert, and a small portion of Mongolia. With him, Sera Metropolis is Kantchew, on the Kendulon river, in the north-west angle of the province of Shensi, latitude north 39°, and longitude west of Peking, 15° 32'. For this position he assigns no other reasons, than that Kantchew has been always a city of importance, and is at present the capital of a province of the same

name, and because it stands at the junction of two streams, running north, and forming what is denominated the river of Etzine. This city, according to him, is the utmost limit of Ptolemy's knowledge eastward. This river of Etzine running by Sera Metropolis, or Kantchew, is according to him the Batusius of Ptolemy, and the mountains Ottorocoras and Emodus, from which the two branches of the Batusius rise, are the mountains to the south-west and south of Kantchew. No man who does not suffer himself to be blinded by the magic of a great name, will ever believe on the authority of D'Anville, great as it deservedly is in matters of geography, that the great river Batusius is the insignificant stream of the Kenduton, or Etzine, or that the Ottorocoras and Emodus Mountains are those that lie to the south of Kantchew, and to the north of the Lake of Kokonor. According to Ptolemy's tables, the south-west source of the Batusius, in the mountain Emodus, is about 1000 English miles distant from Sera Metropolis, and the north-west branch still farther. He makes the Emodus to run along the southern frontier of Scythia extra Imaum and Serica, from 153° to 169° east longitude, in the parallel of 36° north latitude, and the Ottorocoras is just the same range, carried from 169° to 176°, under that name.

In fact, the Imaus, Emodus, and Ottorocoras mountains constitute the northern frontier of Tibet, the whole way from the Pass of Chiltung on the N. W. to the sources of the Whangho, on the S. E. The learned authors of the Modern Universal History identify the Sera Metropolis of Ptolemy, with the modern Ninghya or Hyachew, the ancient capital of Tangut, and make this city the eastern terminus of Ptolemy's knowledge, which is a more rational opinion than that of D'Anville, as it lies more than 50 to the east of Kantchew, and is situated on the great river Karamuran, or Whangho, which, of course, in their opinion, is the Batusius of Ptolemy, and corresponds much better to its described course and magnitude in Ptolemy's table of Serica, than the contemptible streamlet of the Kendulon, and actually rises in Mount Emodus, as Ptolemy says, and of course the great northern bend of the Whangho is the utmost boundary of Serica to the east. In D'Anville's opinion, Kantchew is Sera Metropolis, because its latitude comes within a fraction of a degree to that of Sera Metropolis. The same reason will hold more strongly in favour of Ninghya, which differs only 4' of latitude from that of Sera Metropolis in Ptolemy. The Issedon Serica of Ptolemy is identified by D'Anville with the city of Lop, near the lake of the same name, because placed at the confluence of the Cechardus with another river coming from the north-west because the Chinese name indicates its position at such a confluence, and because, under the name of Tankabe, or Khakhan, it was the ancient residence of the Khan of the Taghasghas, as stated by Edrisi. All this may be true, and yet not prove it to be the Issedon Serica of Ptolemy. Why may not Issedon Serica be as well identified with the modern Sining, on the frontiers of Tibet and Shensi. The canton in which it is situated is called Seri, and the town itself Selia, or Serin, and the river on which it stands, and from which it derives its name is the rapid Selin-Rol, as Pallas was informed by the Bucharians who came to the fair of Kiachta, on the Russian frontier, and who were natives of that place. This stream is composed by the

confluence of two mountain streams, which run south-east to the Olan-Muren, which again flows south-east to the Whangho. As, therefore, the canton is called Serî, and the city and river are both called Serin; and as it has been always a place of great inland commerce with China, Tibet and the Lesser Bucharîa being the place where merchants from all these countries meet, may it not be the Issedon Serica of Ptolemy? If the canton itself be called Serî, and the town and river be called Serin, would not the people be called Seres, and the district be called Serica by the ancients, and the names Seres and Serica be transferred by the Greek and Roman merchants who came thither to China itself. As on this subject we have nothing but conjectures to go upon, the one hazarded above appears to me as probable as any that has yet been advanced respecting the origin of the names Seres and Serica. As Sericum, a silk garment, comes from Ser, Silk, so this latter name would be imposed on the raw material, because it came from the canton of Serî, and the commercial mart of Serin or Sining. If Issedon Serica be the Lop of D'Anville, it is at least 25° west of Peking, if this latter be the Sera Metropolis of Ptolemy, whereas, in his table of Serica, it is only 14° 30' west of Sera Metropolis. If this latter city be Kantchew, according to D'Anville, and Issedon Serica be Lop, it is only 9° west of it, instead of 14° 30' as in Ptolemy. On the other hand, if Sining, Selin, or Serin be Issedon Serica, it comes within 10' of Ptolemy's longitude, if Sera Metropolis be Peking. It is true, however, that Ptolemy places Issedon Serica in 45° north latitude, whilst Sining is in 36° 40' north latitude, or 8° 20' south of it, in his table.

It must be remembered however, that D'Anville himself pays no regard to either the longitudes or latitudes of Ptolemy, in the identification of ancient and modern names, and why also should we. The Asmiræa of Ptolemy he regards as Hamî or Khamîl, and is certain of it, from the similarity of sound. It is probable that D'Anville is right, though Ptolemy places it 3° 20' to the north, and 8° to the east of Lop, if it be Issedon Serica. Here again Ptolemy places Asmiræa 7° only west of Sera Metropolis, which so far agrees with D'Anville, if Sera Metropolis be Kantchew, though near 10° north of Ptolemy's Sera Metropolis. I have no doubt but the Auzacia of Ptolemy is the Auksoo of D'Anville, and that the Auzacî Montes are the same with the Alak Oola, or Speckled Mountains, separating Soongaria from the Lesser Bucharîa on the south, and that the Montes Asmiræ, are just a south-eastern prolongation of the same range, passing to the north of Turfan and Hamî. There can be as little doubt that the Casî Montes are a central range running north-east through Little Bucharîa, parallel with the mountains of Auksoo, Turfan and Hamî. Ptolemy extends them from 153° to 171° E. Long. and from 40° to 44° N. Lat., yet D'Anville can only find this chain, in a circular range that surrounds the small lake of Cas Nor, which merely signifies the Mountain Lake. I have no doubt but that the appellative Casî Montes, is a mere translation of the Sanscrit appellative Cas, a mountain. The Tagurus Mons seems another name of the north-eastern termination of the same range, from the Ithaguri or Igours, who inhabited its declivities. The southern range separating Scythia and Serica, from India, (Tibet read) is called Imaus in the western extremity, Emodus in the central part, and Ottorocoras in the

eastern extremity, corresponding to the modern Mooz Taugh, or Icy Mountain. In fact the description of Little Bucharîa, given by the authors of the Modern Universal History,¹ exactly corresponds to Ptolemy's description, being a long chain of mountains, with its branches extending through the Kobi, or Great Desert, which towards the feet of these hills is interspersed with fruitful plains, so that it resembles a long reef of rocks and islands rising in the sea. The Montes Annîbi of Ptolemy, which he says, surround the Seres, I believe with D'Anville to be the Altay Alim, or the Bogdo Alim, or the Almighty Mountain, separating Soongaria on the west, from Mongolia on the east, and which is a central range running north-west, and south-east, and is perhaps the highest of all the ranges of central Asia. He peoples this range with a tribe of the same name, to the north of which he places a tribe of cannibals, and to the east of the same range he places the Garinæi and the Rhabbanæi, so that Ptolemy's knowledge extended to the east of the Altayan range, into Mongolia. He places another tribe called Sizyges, in eastern Soongaria, between Mount Altay, and the Alakoola, and in their vicinity the Dammæ. The Pindæ, in the north-west of Little Bucharîa, and the Cechardæ are placed on a river of the same name, composed of the combined streams of the river of Cashgar, and the river of Yarkund, and perhaps of that of Khoten. The Issedones inhabited the central range of the Casî Montes, called a great nation by Ptolemy. More east than these, were the Throani, and to the east of these the Ithaguri, all inhabiting both sides of the same range. South of the Issedones, Ptolemy places the Aspacars, after these the Batæ, and the Attaracoras, southernmost of all, next the Emodian and Serican Mountains. A place named Pai in the longitudes and latitudes of the different cities in Little Bucharîa, in the general history of China, would correspond to the Pindæ of Ptolemy, were it not that it is placed 3° to the east of Auksoo, which seems to differ from Ptolemy's table, which places it 16° east of the same place. D'Anville supposes the Chauranei Seythæ of Ptolemy to have inhabited the range of Koïran in Tibet. There is an evident similarity of sound between the two names, but to argue from this, to the identity of both is not conclusive. The mountains of Koïran are too far removed to correspond to the Chauranei of Ptolemy, being the central range of Tibet between Lassa, and the Lake of Terkîrî. I take the Chauranei to be the Karia of Strahlenberg, to the south-east of Khoten, and in nearly the same latitude as Ptolemy has given it.

Thus we have considered D'Anville's outline of Ptolemy's Serican Geography, and have found it to be meagre, imperfect, and inconclusive. If a line be drawn from Kantchew, north-west to Mount Altay, we have, according to him, the eastern limit of ancient geographical knowledge, and consequently that China was completely a *terra incognita* to Ptolemy and the ancients. If Kantchew be Sera Metropolis, then the error of Ptolemy's longitudes, will be increased to more than 55° of a great circle, or upwards of 4000 English miles, Kantchew or Sera Metropolis, being by his table 177° 15' east of the Fortunate Islands, whilst its real longitude is 118° 30' of the same meridian. In proportion as he has increased

the errors of Ptolemy's longitudes, so in the same proportion has he reduced the distance between the Stone Castle, and Sera Metropolis, the 45th of a great circle in Ptolemy's tables between these points being diminished to 28th of longitude in the parallel of 40°; or less than 1,500 English miles, for such is the direct distance between the Castle of Aatas in Fergana (the Aatas of Edrisi) and Kantchew, and yet according to D'Anville's interpretation of Ptolemy, it took seven months to travel this distance. Who can believe it? It is very wonderful that Ptolemy's knowledge should have extended no farther than Kantchew, whilst Pliny, his predecessor, who never saw the journals of Marinus, should not only have known his Echarodus and Bantius rivers, under the names of the Cambris and Paisara, but also a third large river in Serica, which he calls the Lanos, the modern Lena; consequently by D'Anville's hypothesis, Pliny's geographical knowledge extended 80 farther east than that of Ptolemy, the source of the Lena being so much farther east than the parallel of Kantchew.

Gosselin, in his Memoir on the Stone Castle, and the country of the Seres, and Malte Brun, in his Geographie, Tom. I. p. 123, and in the second volume of the English Translation, p. 462, agrees that Serica is not China. Where do these gentlemen then fix it? In Tibet. Serica, says Malte Brun, seems to have included the western parts of Tibet, Serinagur, Cashmere, Little Tibet, and perhaps a small part of Little Bucharia. Dr. Hager has refuted the former of these gentlemen, in his work on Chinese coins, and in his Dissertation on the Lithinos Pyrgos, yet notwithstanding this exposure of Gosselin's absurdities, Malte Brun declares that though the subject of the situation of Serica has been a constant problem for nigh 2000 years, it remains a problem still, and like Gosselin would seek it in Tibet, supposing its capital to be Serinagur on the Ganges. If these gentlemen will have Serica to be Tibet, and not China, and Serinagur on the Ganges to be the Sera Metropolis of Ptolemy, why not fix upon Serinagur in Cashmere, as it would answer their purpose better than the barren valley of Serinagur on the Alucknundra. A greater absurdity than this is not to be found in all the absurd things that have been said and advanced by geographers. It betrays gross ignorance in Gosselin to have supposed that ever the small town of Serinagur on the Ganges, (the Alucknundra) was the capital of Tibet, or that it could possibly be the Sera Metropolis. If he could not discover any thing like the Lithinos Pyrgos in the wild solitudes of Scythia, how came he to find the Sera Metropolis in the wilds of the Heemalleh, or in the desert glen of Serinagur. Malte Brun, as if conscious that his opinion of Serinagur being Sera Metropolis would not stand the test of investigation, fixes it at last in the vicinity of Lassa, the real capital of Tibet. Speaking of a Lama monastery called Sera, near Lassa, he says, "*Sera is a monastery with a town at a short distance from Lassa. In it we may recognise Sera the Metropolis mentioned by the ancients.*" So according to this gentleman's account of the route of the caravans from the Stone Castle to Sera Metropolis, they travelled all the way from Tashkunt on the Jaxartes, to Sera on

the Sanpo near Lassa. It is a wonderful route indeed, take it which way we please. Language would fail entirely in attempting to describe the perils and the difficulties of such a route as this, and to such a country. What *variis casus*, what *tot discrimina rerum* must they not have endured in this tremendous peregrination! But as Malte Brun, when speaking of the signification of the appellation Serica, says, that it may denote in Sanscrit, the country of Happiness, they at last accomplished their arduous pilgrimage, and arrived in the happy country of Tibet. How ravished would they be, when the delectable mountains of Heemalleh first struck their astonished view. So it seems Tibet or Serica is the region of Happiness! No doubt if solitude and sublimity are the true sources of enjoyment, they will be found in perfection there, in those sublime solitudes, fenced and guarded by stupendous ranges, on whose crested summits raised aloft in the blue vault of heaven, eternal sunshine settles,—those loftiest peaks of nature's sublimest height, which rear their heads in calm and bold defiance of the lightning and the tempest, whilst around their snow-clothed sides the cloud, the mist, and the storm are immutably held as tributaries to their super Alpine grandeur. It is a most improbable circumstance that either the Hindoos or their Bramins should have applied the appellation of the Happy country to Tibet. It is much more probable that they would apply it to their own country, as every nation thinks its own country best, not even excepting the Greenlanders.

The appellation of Serica or the Happy country is proverbial of the delightful valley of Cashmere, the celebrated retreat of the once potent sovereigns of Delhi, from Akbar, down to Aurungzebe, who seemed to forget the cares of government in that sequestered and delightful spot. So poor and barren is the valley of Serinagur on the Ganges, that it was exempted from tribute to the Mogul emperors. The Rajah of that place, when requested by Akbar the Mogul emperor to give an account of his finances, and the state of his Rajahdhy, humorously introduced a lean camel to the presence of his sovereign, saying, *this is a faithful picture of the territory I possess, up and down, and very poor*. Akbar smiled at the ingenuity of the Rajah, and replied, that from so poor a country he could require no tribute; yet this miserable place is the Sera Metropolis of Gosselin, and Malte Brun, and the Happy country of the latter! It is amazing to see how authors are caught by sound, and argue identity of place from similarity of orthography. It was because Malte Brun imagined Tibet to be Serica, merely because there is a town called Serinagur, near the Heemalleh, and a monastery called Sera, on the Sanpo. There is a large city called Sera in Mysore, and one might as well have concluded that Mysore was Serica, and Sera, in Mysore, the Sera Metropolis of Ptolemy, as Gosselin and Malte Brun did in placing both in Tibet. As for Rennel, he is clearly of D'Anville's opinion, that Serica is not China, and that it merely included the country of the Eluths, and part of Tartary. Having noticed, says he, an error or two of M. D'Anville's, which *fell in my way*, I feel it a duty even to *go out of my way*, in order to add my opinion to his on the subject of Serica, and the limits of the world as known to the ancients. I cannot hesitate a moment after examining the evidence, to determine with him, that the Sera Metropolis of Ptolemy was situated at the north-west

1 Mem. du Nord. I. 208. Geography, vol. II. English translation, Note, p. 625.

extremity of the present empire of China, (Kantchew) and very near to the parallel assigned it by that geographer. Of course the knowledge of Ptolemy ended at this point eastward, and that the rivers of Serica are evidently meant by the context for those of Eygur, (Yugure) and Tangut.¹ After what we have stated respecting D'Anville's opinion on the subject, and the evidence adduced, the reader will best judge for himself, whether he be perfectly satisfied like Major Rennel, in the justness of D'Anville's conclusions respecting Serica, and the extent of Ptolemy's knowledge in that direction. Manners, in his *Geography of the Ancients*, is of the same opinion, that Serica is not China, but Tartary.

Pinkerton is equally positive of Ptolemy's ignorance, as also Dr. Robertson,² but they have advanced nothing new on the subject, to what has been already advanced. I, therefore, cannot avoid falling in with Mr. Murray's opinion, (though differing from him in the site of the Stone Castle, as stated before) that Serica is China, and that the Seres are Chinese. The length of the journey of the caravan which went from Western to Eastern Asia, for to purchase silk, and the localities referred to in the account of Ptolemy, induce the belief that Serica was China. The account given of the Seres, their manners, their prejudices, their produce, with

their manufactures and trade, correspond in every particular to the picture presented by China, as it is known, and as it has invariably existed with that stationary people from time immemorial. We know from the late lamented Mr. Morecroft, that caravans are in the habit of going from Cashgar and Yarkund to China, and that a constant commercial intercourse takes place between Cashgar and Sining in Shensi, as he expected, had he obtained liberty to go from Ladauk to Cashgar, to have got British manufactures exported to Shensi by means of Cashgar caravans.

That a commercial intercourse existed between Western Asia and China, has been evinced by the elder and very learned De Guignes, in the *Memoirs of the Academy of Inscriptions*.³ If it be true, as Florus relates, that the king of the Seres, or Chinese, sent an embassy to Rome in the reign of Augustus, and that four years were spent in the journey; and if it be true, as the Chinese annals themselves say, that the Roman emperor, or Antoninus, sent an embassy to China, why should it be deemed a thing either absurd or impossible, that Ptolemy should have known China? Is it possible to conceive that Greek or Roman caravans should have advanced as far as Kantchew, a place within the wall of China, and therefore subject to China, and not have heard of China? All the country from Cashgar to Shensi, through which the caravan travelled, was then under the Chinese sceptre, and is it possible to suppose, that, while all that time under Chinese protection and surveillance, they should have known nothing of China? The supposition is impossible. Are we to imagine that the Seres were mere Tartars, who have never from immemorial time cultivated either manufactures or commerce, or that the ancients were so ignorant as to apply the name of a nation and a country to such merchants as were content for the love of gain to live in the deserts of Mongolia, or amidst the mountains of Tibet, and confound them with their Scythian lords? What purpose could be possibly gained by a caravan travelling all the way from Issus, if, according to the commonly received opinion of modern geographers, Serica be not China, but Tartary or Tibet? What articles of merchandise or manufactures could be procured in these regions, but camels' hair, or the wool of goats and sheep? For these reasons, I cannot acquiesce in the opinion that Serica is Tartary, and that Ptolemy was ignorant of China. It will be objected, that, if the Serica of Ptolemy be China, why are his descriptions of so populous and commercial a region so meagre; and why do his tables exhibit so barren a list of cities and rivers. This may very easily be answered, by observing, that Ptolemy's description applies solely to Northern China, and the route traversed by the caravan in going to the Metropolis. Of the 15 cities mentioned in his table of Serica, eight only can be considered as strictly belonging to China, the remaining seven belonging to Little Bucharja. As the Whangho must have been crossed in the route, it must be the Baitusis of Ptolemy. Ptolemy could give no other information than was obtained in that route. It has always been the policy of the Chinese to keep foreigners, whether under the character of ambassadors or merchants, under a system of vigilant and cautious

1 Mem. of a Map of India, p. 198. Ed. 3d, 1793.

2 As this reverend gentleman is the mouthpiece or echoer of the sentiments of D'Anville and Gosselin, his authority in a matter of this kind is of little weight. He speaks of Ptolemy's knowledge concerning various nations towards the north, which, according to the position he gives them, occupied parts of the Great Plain of Tartary, considerably beyond Lassa, the capital of Tibet. This is a piece of extraordinary geography. In going eastward to Sera Metropolis, Tibet, and, of course, Lassa, lay to the south, and not to the north; and what does he mean of the Great Plain of Tartary extending considerably beyond Lassa? Who ever heard that Tibet was a level country, and that Lassa was in a plain? If he mean any thing definite by that expression, it must be the Cobi, or Great Desert, and this is at least seven degrees north of the parallel of Lassa. He farther says, that the latitudes of several places in this part of Asia are fixed by Ptolemy with such uncommon precision, as to leave hardly a doubt that they were determined by actual observation. Where is the proof? Not from Ptolemy himself, who fixed them solely in these parts, by itineraries and road-distances, and then calculated the latitudes from the windings of the roads. Robertson instances three places as proofs of his inference, and these are taken from D'Anville, Nagara, Samarcand, and Sera Metropolis. Respecting the first, which, in conformity to D'Anville, he makes Attock, unfortunately for both him and his oracle D'Anville, Nagara is not Attock, and Attock, instead of being in $32^{\circ} 30'$, as he, from D'Anville, has made it, is in $33^{\circ} 57'$. Now, Ptolemy made Nagara to be in $32^{\circ} 30'$ north latitude; and therefore, from its agreement with D'Anville's position, he inferred sagaciously, that the latitude of that place was taken from actual observation. The inference, therefore, is wrong; and though it had been actually taken, it would have made the matter worse, for it would have been a wrong observation; and of consequence, what reliance could be placed on Ptolemy's latitudes, if Nagara was placed, by observation, 87 Geogr. miles south of its true position. Besides, what dependence can we place on the observation of an Oriental geographer as confirming the position of Nagara in $32^{\circ} 30'$ north latitude, and which Robertson quotes with great complacency. It only proves that all the three are wrong, if Nagara be Attock. The latitude of Samarcand is not far wrong. But if Sera Metropolis be Peking, it is $1^{\circ} 40'$ too far south, and if Taiman-fu, near two degrees too far north. To infer from the casual approximation of one or two latitudes, to the true observed latitudes, that, therefore, they were taken by actual observation on the spot, proves too much, and therefore proves nothing. For my own part, I place very little reliance on Ptolemy's latitudes and longitudes in this part of his geography, and nearly as little on Oriental tables, though trumped up with great applause by D'Anville and Robertson.

restraint. Persons are not allowed at their pleasure to deviate from the prescribed route, or to ramble for the purpose of gratifying curiosity, from one part of China to another. If the same policy was rigidly enforced on the Roman ambassadors, or caravans, as has been practised in modern times, as in the case of our own embassies, those of lords Macartney and Amherst, the Greeks or Romans could not possibly gain much geographical knowledge of a region whose interior they were never permitted to explore. What geographical information have we obtained of the interior of China, but from the Jesuit missionaries, and would we have obtained even so much from them, had not the able emperor Kanghu been curious to know the geography of his own empire, and finding the Jesuits well skilled in astronomical, mathematical, and geographical science, and therefore exactly fitted to answer his views, employed them accordingly in making a trigonometrical survey of his Chinese dominions. Supposing our knowledge had been entirely obtained from our own ambassadors, or our own merchants, just as Ptolemy obtained his, what would have been the amount? The sum total would have been confined to the vicinity of Canton and the route thence to Peking, or to the still shorter space traversed by the great canal from the Great Kiang to the capital. In such a case, our geographical knowledge of China would have been much the same in kind as that contained in Ptolemy's tables of *Serica*, a meagre list of the longitudes and latitudes of the cities and rivers passed in the route. As no more intelligence could possibly be communicated than what was obtained in the case of our own embassies, so no more could be communicated in the case of Ptolemy. As all the country to the right and left of the route was under the Chinese government, the merchants of the caravan would extend the name of *Serica* to the whole.

It must also be remembered, that the Greek and Roman merchants who went to China, would be totally unacquainted with the monosyllabic language of the Chinese, a language which has no alphabet, and would have to transact business wholly by means of interpreters. Any knowledge of China obtained in this way would necessarily be very imperfect and obscure; whereas, the modern knowledge of China has been obtained from men who dwell in the empire, traversed it, were acquainted with the language of the country, and who could converse with the natives, decipher their characters, and read their books. The ancients, therefore, totally ignorant of the language of a people with whom they maintained occasional commercial intercourse, knew not their true national appellation, and therefore gave them a name deduced from the staple article which the country produced, and which they purchased, or derived from the district of *Seri*, where the fairs were held, and the commodity of silk was exchanged for the money or the productions of the west. If we admit the etymology of the appellation *Serica* to be derived from *ser*, a silk-worm, on the authority of Pausanias, who says that the *Seres* have in their country a spinning insect, which the Greeks call *ser*, then it is indisputable that China, and not Tartary, or Tibet, is the country of the silk-worm. Even the culture of this insect is confined to the southern provinces of China. It is absurd to suppose that either Mongolia, or the Lesser Bucharia, or Tibet, could be called *Serica*, or the land of

the silk-worm. The climates of these countries are too cold for the growth of mulberry-trees, on account of their vast elevation of several thousand feet above the level of the sea; and how, therefore, could silk-worms be reared in these regions. Who, besides, ever heard or imagined that Tartars reared silk-worms or cultivated mulberry-trees, or that ever Tartars were silk-weavers. For these reasons, I am compelled to affirm that China, and no other country but it, was the *Serica* of the ancients and Ptolemy.

Respecting Ptolemy's Indian geography, his delineation of it is equally erroneous with that of the British Isles, for, according to him, it stretches in a right line from east to west, a little to the south of a line drawn from the Ganges to the Indus. This is very extraordinary ignorance of the form of India, for its coasts are known to form the sides of a triangle, whose perpendicular almost equals its base, Cape Comorin being the apex, or southern point of that triangle. One would imagine, as Rennel well observes, that the worst set of ancient maps of India has travelled down to us, and that Ptolemy, in its construction, did not express the idea of well informed people of his own time on that subject. Yet it appears that the detail of the coast was well known to him, as is clear from his 10th table. There is one particular excellence, however, in his description of India, that it serves as a point of connexion between the Macedonian orthography and the Sanscrit, dispersing light on both sides, and showing himself like a luminary in the centre. Colonel Wilford, from his knowledge of the Sanscrit, and from comparing the Sanscrit names of places in India with those in ancient authors, particularly Ptolemy, has been eminently successful in illustrating the ancient geography of India. For instance, his *Arcati*, the capital of the *Sore*, (or *Sora-Mandalum*, whence, corruptly, *Coromandel*) is the modern *Arcot*; *Mesolia*, the district of *Masulipatam*; the river *Chaberis*, the *Cauvery*; *Modura regia*, *Madoora*; *Oxene regia*, *Oujein* in *Malwa*; *Naulibe* on the *Indus*, *Nelaub*; *Muziris emporium*, *Merjee*; *Nelsynda*, *Nellsuram*; *Barace*, *Barcelore*; *Comaria*, *extrema*, *Cape Comorin*. Wilford thinks, that lists of countries, rivers, and mountains, in Sanscrit, but written without any explanations whatever, and called *Desamala*, or garlands of countries, were anciently common in India, and that they seem to have been known to *Megasthenes* and *Pliny*, and refers for proof of this to the 20th chap. of *Pliny*, 6th book, in which he says, that the account of so many countries all over India, cannot be the result of the travels of several individuals, but must be extracted from such lists. It is also Wilford's opinion, that in the times of *Pliny* and Ptolemy, the ancients had a more full and copious geographical account of India than we had 40 years since. Unfortunately, however, for want of regular itineraries and astronomical observation, their latitudes and longitudes were only inferred, which renders them a mere mass of confusion.

The whole of India is by Ptolemy divided into two great regions, denominated *intra et extra Gangem*, a division which, till very lately, all modern geographers adopted, with the addition of the regio *Sinarum*, thus including under India, as a generic term, all the tract from the mouth of the *Indus* to the south-west extremity of China. He extended India, on the northern side, from 119°, the eastern limit of *Paropamisus*, to the north-west end of the *Montes Sema-*

thini, in 170° east longitude, and 33° north latitude, or 51 degrees of a great circle, or 3060 Geogr. miles. On the southern side, he extended its longitude from the western mouth of the Indus, in 110° east longitude, to the mouths of the Aspathara, in 175° east longitude, and 16° north latitude, or 65° of a great circle. Nay, he seems to have made the whole course of the Aspathara its eastern limit, enlarging its longitude to the south-east extremity of the Semanthine Mountains, in east longitude 280°, and north latitude 26°, where he fixes the sources of the Aspathara. The northern limit of India intra Gangem, he makes to be Imaus, the whole way from the western extremity of the Hindoo Kho, to 145° east longitude, and 33° north latitude, or 9° to the east of the source of the Ganges. This range, he says, divides India from Sogdiana and the Sace, overlooking it. As the Sace, therefore, are represented as inhabiting all the space north of the Imaus, as far east as 145° east longitude, it must have included all the tract eastward of the Beloor-Taugh to the lateral range, connecting the Southern with the Northern Imaus, and separating Eastern from Western Tibet. The hilly region extending south from the Imaus to the plains, he ranges successively under the names of the Mountains of the Lambata, the Comedi, Sunastene, the Mountains of the Daradæ, Caspiria, and Culindrine, corresponding to the modern Lumghanate, Kaufeerustan, Sewad, the valley of the Upper Indus, Cashmere, and the hilly tracts successively watered by the Jhylum, Chunaub, and Rauvee. Culindrine is the hilly region watered successively by the Beyah, Sutlej, Jumna, and Ganges.

The following expression used by Ptolemy respecting the Daradæ, near the sources of the Indus, "*Horum montana supereminet*," deserves notice. Now, though it is clear that his position of the source of the Indus in his table applies to the Abba Seen, or rather perhaps the Shauiyook, the north-west branch, yet this phrase is so eminently expressive of the height of this range that runs parallel to the south-east branch in the upper valley of Ladauk, that I am almost induced to suppose, that through some misconception of his information, he delineated the Indus as coming from the north-west, instead of from the south-east. Daradæ is evidently derived from Dhar, a ridge, and means those who inhabited mountain ranges, and the expression indicates the superior elevation of the range of the Upper Indus to all the other ranges in India, for a similar expression no where occurs in his description of India. Unless it mean this, I am at a loss to understand its propriety. Now, what says Mr. Morecroft, respecting the range of the Indus, as seen from the pass of Hangarang. "In front was a granitic range of most desolate aspect, not a blade of vegetation visible, the snow itself only finding a resting place at the height of 19,000 feet. Beyond this range, through a break, were seen snowy mountains pale with distance, appearing to rise out of the table-land of the Indus, and from the angles of altitude, I observed, their pale outline, and the broad margin of the snow, they cannot be less elevated than 29,000 feet. The impression which their faint cloud-like appearance leaves upon the mind of the spectator, who views them on the verge of the horizon, language fails to convey. It is like something that we have seen, but of which the idea retained, is only vague and ill defined, appearing through the dimness of distance, as

objects mingling with the skies." Captain Gerard who saw the same range from the passes of Keobrung and Hangarang, the former of which is 18,313 feet in height, observes, that it was so completely covered with snow, that not a rock could be distinguished by a telescope of great magnifying powers. Now the expression of Ptolemy respecting the Daradæ, that their mountains excel in height, so harmonizes with what has been quoted above, that though his longitude and latitude of the source of the Indus and the mountains of the Daradæ point to a different direction, the circumstance mentioned in addition clearly refers to the upper part of the valley of Ladauk. The publication of Mr. Morecroft's journey to Ladauk, if his papers and observations be preserved, can alone convey clear light on the subject.

East of the Ganges, Ptolemy's boundary of India is still the Imaus, carried east under the names of Emodus and Ottorocorras, but he seems to have included Tibet within that boundary, as the ranges immediately bounding the plains of India are called Bepyrhus and Semanthinus. Of course, I take the former to be the northern boundary of Tibet, and the southern limit of his Scythia and Serica, and the latter ranges, those which separate India from Tibet. Bepyrhus is so evidently from the Sanscrit Beempheri, "tremendous passes up and down the mountains," that not a doubt can remain that Ptolemy meant by it, the whole of the hilly region from the plains to the base of Imaus, that divides the streams that descend to the Ganges and Burrampooter, from those that run in a contrary direction to the San-po, and therefore, that it included all the mountainous country in northern Hindostan, from the upper course of the Ganges to the eastern extremity of Assam where commence the Montes Semanthini, which run, agreeably to his table, south-east to the frontiers of Yunnan in China, and constitute the southern frontiers of Tibet, or those which divide it from the dominions of Ava. That he distinguishes Bepyrhus, from Imaus, is evident from his placing a tribe between it and Imaus. "*Inter montem autem Imaum et Bepyrhum Talcoræl sunt, maxime ad Aretos vergentes.*" Now it is remarkable that in Nepal there is a tribe called Thakurs or Ranas, who are again subdivided into two tribes, Kas and Magars, both mountaineers. As the pass into Nepal is called Beemphede and Bayphair, and leads over the Lama Dangra range, the Thakurs or Talchorei live, as Ptolemy says, between Bepyrhus and Imaus. But it is probable that as the word Thakur more generally means a lordship or principality, Ptolemy mistook the plural term Thakurai, Lordships, for the designation of a people. The whole of the Alpine tract is filled with such lordships. We learn from both Buchanan and Fraser, that a large hilly district, east of the Sutlej, is called Bara Thakurai, the 12 Lordships. At the entrance of the great snowy range, is a city called Thakacote, and almost in the centre of that range is a village and pass called Taklacote, and at the base of Imaus itself is a Lama monastery called Takoor Goomba. Now these tribes, lordships, and places, bear so manifest a resemblance in orthography and position to the Talchorei of Ptolemy, that hardly a doubt can remain of their identity. Next to them Ptolemy places the Coranali. I have no hesitation in believing these to be the Gurungs, a numerous mountain tribe in the dominions of Nepal, and who are

subdivided into a number of minor tribes, and addicted to a pastoral life, frequenting the Alpine regions in summer, and returning to the valleys in winter. They require a cold climate, and live much intermixed with the Bhotiyas on both sides of the snow-covered Imaus, and in the narrow valleys interposed. The term *Semanthini*, is derived from the Sanscrit *Samanta*, the limit or end of the world, to the east. The *Mons Damusus* is from the Sanscrit *Yamya*, or the south, and corresponds to the range that runs south of Assam, called the Garrow Mountains, which rise in elevation as they run eastward, towards the Semanthine range. *Mons Mæandrus* is recognized in the *Mayunadri* or *Mayun Mountains*, from a tribe called *Mayun*, who inhabit them, between *Chittagong* and *Aracan*.

The northern part of these mountains is called *Tilædri*, and Ptolemy places a people called *Tilædæ*, beyond *Mount Mæandrus*, to the east. Now these are the *Peguers* or *Taliens*, and a pass leading over the range from *Aracan* to *Ava*, is called *Tallaki*. In the *Nangalogue* of Ptolemy on *Mount Mæandrus*, Wilford recognizes the savage tribe of *Kookies*, who inhabit the mountains bordering the district of *Chittagong*. *Nangalogue* with Ptolemy signifies a naked country. In the *Hindee* language, *Nangaloga* means the same, and the country of the *Kookies* is called in the *Puranas*, *Nangadessa*, or the country of the *naked people*, and the *Kookies* call themselves *Nanetas* or the *naked*. In the *Ottorocorras* *Mons* of Ptolemy, Wilford recognizes the northern part of Assam, called *Uttarogora*, or *Uttareol*, and supposes the *Mons Ottorocorras* to be the eastern prolongation of the *Mons Bepyrrius*.

Here, however, Wilford has suffered himself to be imposed on by the mere circumstance of similarity of sound and spelling. Something more is required to identify the ancient and modern names of places, mountains, and rivers, than mere similarity of orthography. If Wilford's conjecture be admitted as legitimate, then *Serica* is Assam, and *Ghergong* the capital, is the *Civitas Ottorocorra* of Ptolemy, which indeed Wilford expressly affirms. In conformity to this, Wilford maintains that the *Bautisus* of Ptolemy, is the *Bramaputra* or river of Assam, and that it is called *Bautisus*, or *Bauti-su* by Ptolemy, because it is the same with the *San-po*, or river of Tibet, called *Bhotu* or the river of *Bhote* or Tibet. In this way, of course, Tibet and Assam are in *Serica*, although the former is clearly not in *Serica*, and the latter lies to the south of the *Mons Ottorocorras*, if we pay any regard to Ptolemy at all. It is a flat contradiction of Ptolemy to say that *Ottorocorras* is the eastern prolongation of *Mons Bepyrrius*, when Ptolemy as expressly makes it an eastern prolongation of the *Mons Emodus*, the north frontier of Tibet. We have Wilford's own testimony for the fact, for he says, that Ptolemy disposed the range of *Bepyrrius*, *Imaus* and *Emodus*, in the form of the letter Y, of which the *Imaus* made the shaft, and *Bepyrrius* and *Emodus* the two branches; *Emodus* to the left, or beyond Tibet, being the left hand branch, or northern *Imaus*, and *Bepyrrius*, the right hand branch, or the southern *Imaus*. *Ottorocorras*, of course, is the prolongation of *Emodus*, or the left hand branch, and not of *Bepyrrius*, or the southern branch. If *Mons Bepyrrius* be an inferior ridge as he says, and distinct from *Imaus*, how can it be the southern branch. *Emodus*, with equal justice might be called an

inferior ridge. He says himself, that *Heema* or *Imaus* is to the north of *Nepaul*, and therefore to the north of *Mons Bepyrrius*. It would be better to say, that the southern branch preserves the name of *Heema* or *Imaus*, whilst the northern obtains that of *Heemada*, or *Emodus*. But in fact, *Emodus* is as really another appellation of the same range, as *Heema*, or *Heemaleca*, for if *Imaus* or *Heema* signify snowy, and *Heemaleca*, the abode of snow, then *Heemadree* signifies the mountain of snow, so that the supposed distinction of *Imaus* and *Emodus*, as if they signified different ranges, is quite fanciful. The *Bautisus* cannot be the *Sanpo*, because the former rises from the north-east side of the *Emodus*, and running along the northern side of the *Ottorocorras* *Mons*, whereas the latter both rises and runs to the south of the *Emodus* and *Ottorocorras*, according to Ptolemy, so that his fanciful hypothesis that *Ottorocorras* is northern Assam, and *Ghergong* the *Civitas Ottorocorra*, is entirely demolished by this single fact. The opinion of *Father Giorgi*, in his *Alphabetum Tibetanum*, that the small streams of the *Bontsu*, which runs north to the *Sanpo*, on the road from *Cathmandoo* to *Lassa*, is the *Bautisus*, is equally fanciful, as it supposes *Serica* to be Tibet, and the route of the *Roman* caravans to *Sera Metropolis* to have led through that mountainous region. To follow Wilford's illustrations of ancient Indian geography any farther, would lead us too far from our point, but our readers may rest satisfied, that Mr. Wilford, from his long stay in Bengal, and his intimate acquaintance with the Sanscrit, the ancient and classical language of India, was much better qualified for the task than either *D'Anville* or *Gosselin*, and his illustrations show that Ptolemy, even with all his faults of longitude and latitude, had a more intimate acquaintance with the interior geography of that region than either of these gentlemen.

How far the knowledge of Ptolemy extended east of the mouths of the *Ganges* is impossible precisely to determine, and equally so to determine the position of his *Regio Sinarum*. It is clear to me that his *Sinæ* are not the Chinese, but who they are, I am unable to say. *D'Anville* supposes them to be the *Cochin Chinese*, and the *Sinarum Metropolis* to be *Siuhoa*, in *127° E. Long.* which he makes to be the eastern point of Ptolemy's knowledge. On the contrary, *Gosselin* makes the *Sinæ* to be the *Siamese*, and their capital to be *Tenasserim*, and *Mergui* to be *Cattigara*. On the one hypothesis Ptolemy's longitude is *53°*, and on the other nigh *62°* too far east, both of them enormously extended. If Ptolemy's *Dorias* be the river of *Chittagong*, his *Tocosanna* the river of *Aracan*, his *Danoss* and *Seruss* be the *Keenduum*, and the river of *Ava*, as Wilford thinks, and his *Regia Triglyphon* be the city of *Aracan*, then the city of *Siam* must correspond to the *Metropolis* of the *Sinæ*. But whether it be *Siam* or *Siuhoa*, his latitudes are nearly as far wrong as his longitudes, for he has stretched *India extra Gangem*, to *4°* south of the equinoctial line, and has placed the *Sinarum Metropolis*, *8° 30'* south of the line. Now, this position is about *20°* south of the sites of these cities, and if any should imagine *Nanking*, or *Tsinanfu*, to be the *Sinarum Metropolis*, the matter is rendered still worse, as they are more than *40°* north of his *Sinarum Metropolis*. It is true that if we reckon the longitude eastward from the source of the river of *Caulbul*, to the eastern point of the peninsula

of Shantung, the amount will be 71°, or 3,976 English miles, or 10° more than his ultimate eastern point, but it must be remembered, that as his degrees are those of a great circle, the intermediate distance on his map, is near 3° more in the parallel of 36° N. Lat., and if Tsinanfu be reckoned his Sinarum Metropolis, still the intermediate distance is 8° too much, although it be 4½ farther east from the western point of India, than in his table, the whole reason of which is, that his degrees are those of a great circle, and divided by 400 stades each. Even in this case, Tsinanfu is 58° too far east of the Fortunate Isles, from this very reason, that his position of the eastern limit of Paropamisus, is 50° too far east. If a line be drawn south-east from the most western mouth of the Indus, in 67° E. Long. to Sinhoa, in Cochín China, in 127° east, and 17° N. Lat., the distance will be 60° of longitude, and 8° of latitude, whereas by Ptolemy, the intermediate distance is 70° of longitude, and 33° of latitude, and if Siam be his Sinarum Metropolis, the errors in longitude and latitude are still more enormous, being 60° of a great circle too far east.

Beyond the Sinus Magnus, whether it be the Gulf of Martaban, or Gulf of Siam, he conceived the continent to stretch south-west from Cattigara, embracing what he calls the Green Sea, as far as the Verdant Cape, on the eastern coast of Africa. If the theory of Gosselein be admitted, the ancients never passed the straits of Malacca, and of course, the coast stretched according to his view of Ptolemy, from Morgui, in the Malay peninsula, south-west to the point above mentioned. If the Sinus Magnus be the Gulf of Siam, as D'Anville thinks, then Cattigara must have stood a little to the north-west of the southernmost point of the peninsula of Camboja, and the coast must have stretched south-west from thence, as far as Cape Prassum on the African coast, and of consequence, the ancients cannot have sailed beyond the southern Cape of Camboja, and of course, I cannot think that Sinhoa in Cochín China is the Sinarum Metropolis of Ptolemy, as in that case, the ancients must have turned the southern cape of Camboja, and sailed north-east along the coast as far as the entrance of the Gulf of Tonking, and must in that case have seen that the coast instead of passing to the south-west, ran to the north-east. The Sinarum Metropolis, or Thinae, for it goes by both names in Ptolemy, seems to have been situate at a distance from the sea, north-east of Cattigara, on the Cotlaris, or river of Japan. This is all we can say of the matter, and it is impossible to arrive at any certainty respecting Ptolemy's geography in this quarter. His knowledge of the coasts eastwards from the Indus, to this point, seems altogether to have been derived from the imperfect accounts of navigators, who had little or no knowledge of the bearings or direction of the courses of their ships. One principal error which caused such enormous longitudes in the ancient maps, was the practice of delineating them on a plain projection, the several divisions of which intersected each other at right angles, and formed exact squares. The basis of this projection was a stadium of 1-700th part of a degree of a great circle. The longitudinal measures though fictitious, were assumed by Ptolemy as real distances, and accommodated to a map constructed on very different principles, whereas he ought to have divided those measures by 700, and not by 500 stadia; 73,000 stadia were reckoned from the Promontorium Sacrum,

to the principal mouth of the Ganges, or 146°, but if these had been divided by 700 stadia, instead of 500 stadia, as Ptolemy has done, the distance would have been reduced to 104° 17' 24" or 41° 42' less, which is just 6° 18' more than the truth.

From the notion that the coast of the Sinus trended south-west till it joined the African coast at Cape Prassum, it is clear that Ptolemy did not admit a communication between the Indian and Atlantic oceans, and made the former a vast basin, surrounded on all sides by land. It is also equally plain that this notion of a terra incognita shutting up the continent on the north and east, is at complete variance with the systems of Eratosthenes, Strabo, Pliny, and Arrian, who believed that to the east of the Ganges was an eastern ocean which terminated the earth in that direction, and which ran north-west to the northern ocean. In this notion Ptolemy followed Hipparchus, who denied that the earth was encompassed by the ocean, but maintained that the ocean was divided into large basins separated from each other by intervening land. He does not say that Serica and the Sinus were the end of the world absolutely, but only that they were so relatively to his knowledge, or that of his time, for he bounds them on the east by a *terra incognita*, or an unknown land, or in other words, that he neither knew the land, nor those who inhabited it, beyond the countries above mentioned. His expression, *terra incognita*, is better than that of the Arabian geographers who succeeded him, who, whenever they have arrived at the *ne plus ultra* of their geographical knowledge, tell us that such a country is bounded by *nations and their generations*.

Respecting Africa, his knowledge of its western coast extended to Sierra Leone. Of the eastern coast, Ptolemy's knowledge did not extend beyond Cape Prassum. Of its interior he possessed a clear and accurate knowledge of some of its parts, and of others he presents us nothing but a mere mass of confusion. He clearly points out the Niger, (respecting which so much curiosity has of late been excited, and which will in all probability be soon gratified) though he has fixed its source in a wrong latitude. In the cities of Tucabath and Tagana, placed by him on its banks, may perhaps be recognised Tombuctoo and Ghana. He allows too great extent to the southern parts of the interior, whilst, at the same time, the Great Desert, or Sahara, is proportionally contracted. He places the sources of the Nile and the Mountains of the Moon in 13° south latitude, instead of 6° or 7° north latitude; but it is clearly manifest from his description, that his Nile is not the Abyssinian river, but the Abiad, or White River. But even this error, however great, is not so unaccountable as that of Cape Aromata, or Guardafui, which he places in 6° north latitude, instead of 11° 50'; its true latitude, a position which was every year visited by merchants, whom he must have seen at Alexandria. Respecting the Ghir of central Africa, modern geographers are as much at a loss where to find it, as they were, till of late, to find the course and termination of the Niger. He erred also, not less than 4½ in the latitude of Carthage, which he makes 32° 21', instead of 36° 51', its true latitude. This error, which removed the African coast so far south, remained unnoticed till the commencement of the 17th century, when it was observed, and in some degree corrected, by Willebord Snellius. Where the Agisymba of

Ptolemy is, none can tell, but he places it $16^{\circ} 25'$ south of the line. Beyond this, he stretches Africa to the South Pole, and denominates all the region south of Agisymba, terra incognita. "Ab Austro vero habitabiles nostrae usque ad Polum Australem, ubi, nobis incogniti habitant, gradus sunt $73^{\circ} 36'$, aut integri gradus 74° ." This was done by Ptolemy, in compliance with the opinion of most ancient geographers, that there was a great southern continent or hemisphere, to balance and correspond to the northern, and this was performed by cutting off the great triangle to the south, and extending Africa indefinitely to the South Pole. The extent of the habitable globe, according to Ptolemy, was the following, allowing 500 stades to a degree of a great circle. From north to south, or from the Isle of Thule, in 63° north latitude, to the southern limit of Agisymba, in Africa, he reckoned 40,000 stades, or 80° , or 4,800 Geo. miles. The length of the known world from west to east, according to him, is different in different parallels. In the most northern parallel, or that of Thule, the length of the known world is 40,854 stades, or $81.42\frac{1}{2}$, or 4,902 Geo. miles.

In the most south parallel, or that of Agisymba, the length is 86,333 stades, or $172^{\circ} 40'$, or 10,350 Geo. miles, but more than one half of this was occupied by the Indian Ocean, the Erythraean Sea, and the Sinus Barbaricus. Over the equinoctial arch, the length of the known world is 90,000 stades, from the Fortunate Islands to the Sinarum Metropolis, through the parallel of Alexandria, or 180° , or 10,800 Geo. miles. In the parallel of Syene, $23^{\circ} 30'$, the length of the known world is 92,336 stades, or $164^{\circ} 36'$ 9,880 Geo. miles. In the parallel of Rhodes, the length of the known world is 72,812 stades, or 145.38° , or 8,738 Geo. miles. The circumference of the globe, according to Ptolemy, was 180,000 stades, or 360s of 500 stades each, equal to 21,600 Geo. miles. Europe, Asia, and Africa, are described by him in 26 tables, the ten first of which include Europe, the four following Africa, and the twelve last Asia. All the districts of the known world he enumerates at 94, 48 of which belong to Asia.

From Ptolemy's geography, we see what was the amount of the knowledge of the Romans in this department of science. If we view a map according to their ideas, we are immediately struck with the form they assigned the world, and perceive with what propriety they called the extent of the world from west to east *longitude*, or length, and the extent from north to south *latitude*, or breadth. We see from Ptolemy, that the latitude of the known world was not half its longitude. We see also, how enormous are the longitudes, compared with the latitudes. In the Pentingerian tables, which contain an itinerary of the whole Roman empire, 35° of longitude occupy 28 feet eight inches, whereas 13° of latitude are compressed within the space of one foot. It is easy to conceive how it happened that too much space is assigned between places situated east and west of each other, as the latitude of a place is much more easily determined than its longitude. As the routes of the Roman armies were generally from west to east, the countries lying in that direction were at the same time better known than those to the north or south, though the longitudes were enormously erroneous.

It is needless to mention Marcian of Heraclea, and Agathemerus, as they added nothing to what was known by Ptolemy; and it may be truly said, as Malte Brun remarks, that the geography of Ptolemy, and the description of Greece by Pausanias, are the last works in which the light of antiquity shines on geography. Near the middle of the 5th century, a work, entitled Christian Topography, was published by Cosmas Indicopleustes, the Indian navigator, at Alexandria. The design of this treatise was to refute the *impious* opinion, that the earth was a globe, and to prove that the earth was an oblong plane, 12,000 miles from east to west, and 6000 in breadth. That the earth was a globe was deemed a heretical opinion by many of the orthodox Fathers, as Lactantius, Augustine, and others; and Cosmas was of the same opinion with these Fathers respecting that tenet. He constructed a map, in which the world was represented as a parallelogram, with a circumambient ocean, and the rivers of Paradise flowing on the outside, whilst the vicissitudes of day and night were not caused by the revolution of the earth or the heavens, but by the sun's disk being obscured by a mountain in the extremity of the north. The earth was surrounded with a wall, and on this was the firmament suspended. In order to account for the course of the rivers, he supposed that the plane of the earth declined from north to south; hence, the Euphrates, Tigris, &c. running to the south, were rapid streams; whereas the Nile, running in a contrary direction, was slow and sluggish. His Caspian Sea joins the ocean, and his Nile, running under the sea, springs up Gihon, in another world. Beyond the ocean, he supposes land, where the antediluvians dwelt. He labours to prove that this is the scriptural account of the geography of the world, and that it was agreeable to the opinions of the most ancient Greek philosophers. His system differs from Homer principally in this, that he made the earth a square, whilst Homer made it round; but both believed that the ocean encompassed the earth, and that the figure of the earth was a plane, and not a globular surface.

We may here conclude our views of the geographical knowledge of the ancients, for, from the time of Ptolemy down to the 10th century, a period of near 800 years, not a single geographical production appeared, so immersed was the world in ignorance. A complete retrogression had taken place in every branch of science which had been formerly cultivated. We may see, from a review of Ptolemy's geographical work, that without the bounds of the Roman empire the ancients knew little. The northern, north-western, north-eastern, and most eastern parts of Asia, were almost utterly unknown. Their knowledge of the Persian empire was superficial and inaccurate. Their geographical knowledge may be said to have terminated at the Tigris; and Ptolemy has been accused of mentioning Persepolis amongst the cities of Persia, whilst that city was then in ruins, and had been so for upwards of three centuries. But if what has been observed in our note upon Persepolis be perused, it will be seen that this censure of the Alexandrian geographer is unjust, that it really existed in his time, and continued to do so, till the latter end of the 10th century. In Europe, nothing was known beyond 63° of north latitude. With Hindostan they were better acquainted than with Persia. Beyond the Gauges, their knowledge was obscure, imperfect, and

inaccurate, so that no geographer, however well skilled in Oriental lore, can make any thing of it. Their knowledge of China was in the same state; and the route of Marinus, fortunately preserved in Ptolemy's first book, meagre as it undoubtedly is, is the only relic left remaining of the ancient geography of Asia beyond the Indus.

Of Africa only, the ancients possessed more information than the moderns, for its interior was pervaded beyond the Great Atlas, to the vicinity of the Niger. The reason is obvious. The moderns make discoveries by sea, whilst the ancients made theirs by land routes. It is upon astronomical science that all geography depends for accuracy and precision, and it is by astronomical observations alone, that we are enabled to fix the positions of cities and the boundaries of regions. Where these are wanting, no dependence can be placed on lists of longitudes and latitudes such as are found in Ptolemy, who fixed them with a very few exceptions, by routes and bearings. These might have gone a great way to settle such longitudes and latitudes as existed within the bounds of the Roman empire, as he had the advantage of consulting the Roman itineraries. But beyond these bounds, he could only trust to the reports of travellers, and fix his geographical positions the best way he could. But for these, combined with the marches of Alexander, the embassies of the Seleucidan princes, and the commercial adventures of Greek merchants and navigators, and the meagre work of Isidore of Charax, Ptolemy could have had no materials for the geography of regions placed beyond the pale of the Roman empire. Maps of countries, or lists of longitudes and latitudes obtained by routes are at best merely conjectural, and can never give the exact position, whether from a fixed meridian, or from each other relatively. Maps constructed on the principle of adopting itineraries, though the best that can be made, where astronomical observations are wanting, are far from attaining that precision and accuracy which alone can constitute a good map. Our author (Rollin) has given us a specimen of this in De Lisle's two maps of Italy and Greece, the one according to the observations of modern geography, and the other according to such astronomical observations as the ancients had made, and to the ancient itineraries. We may quote, in further proof of this, the late triangular mensuration of the Peninsula of India by the late Colonel Lambton. All the previous maps of that region, including those of Rennel and Arrow-smith, had been constructed from military marches, combined with such astronomical observations as had been made on the coast and at a few places in the interior. These had generally been considered as correct, and as giving the true form and dimensions of the peninsula. What was the result of Lambton's measurement by the method of triangles, combined with astronomical observations made at each station? It produced a reduction of 40 miles in the breadth of the peninsula. What said he himself in the preface to his work? I can only hope that the next maps of the peninsula, if any should be published, will be constructed from other materials besides what are furnished by military marches and perambulators. These may do in the hands of a Quarter-Master-General who wants the usual distances that troops have to march, and not the distances reduced to the chords of arcs, nor does it matter to him whether the armies march on the surface of a spheroid or

on a flat. But when such materials are intended for geographical purposes, it becomes necessary to have the outlines, at least, of a general map on correct principles, so that the distances, however crooked and winding, may be adjusted and fitted to those laid down with mathematical accuracy. Under these limitations, the materials furnished from military marches may be eminently useful."

It may also be remarked, that the method of constructing maps on itineraries, such as that of Antoninus, will not do at all in very mountainous countries, such as Italy and Greece, even though the distances be correct, on account of the great inequality of the surface, and the proportional windings of the roads, which can never be ascertained with mathematical precision. It therefore follows, from the inaccuracy of the methods used by the ancients for obtaining latitudes and longitudes, especially the latter, and from the scanty number of such as were really made; and from the method of fixing all others, where such observations were wanting, from itineraries; and of those without the bounds of the Roman empire from vague computations grounded on the reports of travellers, or from the reckonings of ship-captains, ignorant of astronomy and the use of the compass, that the ancients could not give us a good map of any country.

Even the Arabian geographers who came after Ptolemy, made things no better. They all followed his system, both in astronomy and geography, without any improvements in the method of ascertaining longitudes, or taking latitudes. They have no doubt made us acquainted in some measure with the history and geography of the regions east of the Tigris, and south of the Jaxartes, and have furnished us with some caravan routes through them, and from thence to China, but their astronomical observations are not very numerous, and are by no means entitled to the praise of accuracy, nor deserve that confidence which has been placed in them by modern geographers, as De Lisle, Strahlenberg, D'Anville, and Rennel. Their geographical descriptions are chiefly confined to the regions where Mahomedanism was established and professed. The great Abou Abdallah-al-Mamoun, the son of Haroun-al-Raschid, or the Just Prince, who makes in conjunction with his vizier Giafar, so great a figure in the Arabian Nights' Entertainments, was the first who really patronized astronomy, and geography, and wished to imbue his subjects with a taste for the science and learning of the ancients. He collected the volumes of Grecian science, by means of his ambassadors at Constantinople, and his agents in Armenia, Syria, and Egypt, and commanded them to be translated by skilful interpreters into the Arabic language, and exhorted his subjects to peruse these instructive writings. He himself, assisted in person, with pleasure and modesty at the assemblies and disputations of the learned. The works of Aristotle and Plato, of Euclid, and Apollonius, of Ptolemy, Hippocrates, and Galen, were read and studied by the Arabians in these versions, and astronomy was eagerly cultivated. But unhappily, that sublime science became debased by its alliance with astrology, amongst their hands. Like all other oriental nations who had preceded them, the Assyrians, Babylonians, and Magians, the Arabs applied astronomy to divina-

tion, and instead of improving the astronomy of Ptolemy, they never advanced one step towards the discovery of the solar system. Their astronomical tables constructed at Bagdad, Samarcand, Maragha, and Spain, only corrected some minute errors in those of Ptolemy, without venturing to renounce the leading errors of his system. By the command of Al-Mamoun, a celestial arc was twice measured, one in the plain of Senjar, another in that of Cufa, in order to ascertain a degree of the meridian. The costly instruments of observation were supplied by the liberal munificence of the Kalif himself. The mathematicians divided themselves into two parties, one of which went northward, and the other southward, till the former perceived the polar star to be elevated one degree above its altitude in Senjar, and the latter found it as much depressed. Measuring the intermediate space, they fixed the degree to consist of 200,000 royal, or Hashemite cubits, (each consisting of 27 digits, the ancient cubit of Memphis), or 66½ Arabic miles, nearly equalling 69 English miles, thus making the circumference of the earth, about 24,840 English miles.¹

After this encouragement given publicly by the Khalif to astronomical geography, it became fashionable amongst the Arabs, though at the same time the conduct of Al-Mamoun was condemned by the stern votaries of the Mussulmaun faith, and the Mohammedan doctors. Mohammed, Ebn Ketir, al Fargani, who was contemporary with Al-Mamoun, published an astronomical treatise entitled *Al-fusoul-attalaten*, or the 30 Chapters, wherein both astronomy and geography are illustrated. This treatise was published with a Latin version, by the celebrated Golius, at Amsterdam, in 1669, and entitled *Elements of Astronomy*, accompanied with elaborate notes. Abou Ishak published a treatise on geography, in the commencement of the 10th century.

The next Arabian geographer is Massoudi, who died in 957, A. C. His book entitled the *Golden Meadows*, has been translated by the elder Du Guignes, and gives an account of the most celebrated kingdoms in Europe, Asia, and Africa, but the details respecting Africa, India, and the Lesser Asia, are the most accurate and laboured. According to him, a great commercial intercourse was carried on between Bassora and Canton, in China, named Canfu by him. He also describes a route to China, by land, frequented by traders, which seems to have been through Khorasan, Tobbot, and Ilesan, but we are unable to identify the last of these regions, unless it be the tract watered by the Il, on the north frontier of Little Bucharia, or probably the province of Ilak, in Turkestaun, to the north of the Jaxartes or Sihoon, watered by the river of Tonkat. If so, the route must have been by Tashkunt. But the route is inexplicable in either case, for what connexion has Ilak in Turkestan, or Tashkunt, or the still more eastern district of the Il, in Soongaria, with Tobbot or Tibet, or why is Tobbot placed before Ilesan in the order of the route.

The next Arabian geographer is Ebn Hawkal. His country is unknown, and his age cannot be precisely ascertained, but from what he says, respecting Samarcand, he seems to have visited that city about 920, A. D. He appears to have been a great traveller, and a very inaccurate

writer. His geography contains a concise description of all the regions professing the religion of Mohammed, and as for the interior of Africa possessed by the Negroes, Ethiopians and others, he declines describing it for the following curious reason, a reason which would restrict geography to very narrow limits. "As for these people, I make but slight mention of them, because naturally loving wisdom, ingenuity, religion, justice, regular government, how could I notice such people as these, or exalt them, by inserting an account of their countries." He begins with Spain, and ends near the source of the Oxus. There are no longitudes nor latitudes in his book, more than in the *Golden Meadows* of Massoudi. The book however contains much curious information respecting countries of which we possess at present but scanty knowledge, as Bactria, Sogdiana, and the Western Toorkistaun. His description of these countries is very animated, and he dwells with rapture on the beauties of Samarcand and Bochara, then great and flourishing cities, as were also Balch, Iteï, and Cazin. In his days Persepolis still existed, under the name of Istakar, and was, though prodigiously declined, still a mile in length, so we need not wonder if Ptolemy placed it in his tables as a city of note. Nisibis in Mesopotamia, was still a great city, enjoying perpetual verdure and salubrious waters. Siraf on the Persian Gulf was then a large and commercial city, inhabited by wealthy merchants, some of whom, enriched by intercourse with Canton in China, expended no less than 30,000 dinars in the erection of their houses. Above 500,000 families of Nomadic Curds then possessed the mountains and plains of Fars. Ebn Hawkal's geographical description of the existing state of those parts of Asia and Africa, presents a melancholy contrast to their present state under a long continued system of revolution and misrule. India and Arabia are wholly omitted in his geography. It has been lately translated into English by Sir William Ouseley, from a manuscript in his own possession, and published, with notes, in 4to.

After Ebn Hawkal, followed Mohammed Ebn Hassan, and Hossain Achmed-al-Kaleh, of whom the latter composed a treatise on the most remarkable rivers and mountains. In the year 1010, Shams-eddin-Kodsi described the known parts of the globe by climates, the Arabs being unacquainted with any political division of the earth. Bin Courdabebe published a geographical work, entitled *Al-Masalic, Roads and Empires*. He gives the distances from city to city, the revenues of Irac, and other provinces, and the expenses required to support the government. He died in 912, A. D. Al-Birouni published in 1039 a mathematical and astronomical work, entitled *Canoun-al-Massoudi*, because dedicated to Sultan Massoud, the third prince of the house of Ghasna. He was a native of Chorasmia, or Khovarazm, and a great enemy to astrology, the absurdities of which he confuted, in a treatise, entitled the *Wonders of Nature and Art*. In the commencement of the 12th century, Al-Scherif-al-Sachali composed a treatise of ancient and modern geography, entitled *Nozhat-al-Absar*, the re-erection of places. This work was dedicated to Roger, king of Sicily, who ordered a Latin version of it to be made, and who preferred it to all other works on the same subject. The celebrated Scherif-al-Edrisi succeeded next in order, and is commonly known by the name of the Nubian geographer. His work, entitled the *Diversions*

¹ See *Rieske Translation of Abulfeda's Moslemic Annals*, pp. 210, 211.

of the Curious, or the Division of the Earth into Kingdoms, was published in 1150, and also dedicated to Roger, king of Sicily. He was a complete follower of Ptolemy. He shows the distance and length of roads by miles and leagues, following the order of Ptolemy's seven climates. A translation of this work was made in the commencement of the 17th century, by Gabriel Sionita and John Hseronita, two Maronite Christians, and another has been since made by the learned Hartmann. But it must be observed, that the whole of Edrisi's geographical work has not been translated, as no complete copy of the original had then been found. The work of Edrisi is a curious production, and is strongly illustrative of the credulity and ignorance of the Mahomedans in point of geographical information. He gives a strange account of the Turks, whom he represents as having great heads, broad faces, large bushy hair, and flaming eyes, and as worshippers of fire, or Magians. All the Nomade tribes of Asia, except the Mongols and Mandshoors, of whose existence he was ignorant, are classed by him under the general name of Turks, as the Calmucks, called Kaimakiens; Cossacks, called Khofshaks; the Bashkirs, called Besejert; and the Boigariaus, called Olgars by him. Even Tibet, which he calls Tobbot, is with him a part of the regions possessed by the Turks. He has given a curious and minute account of Gog and Magog, whom he names Yajuj and Majuj, from the travels of Salam the Interpreter, about the year 810, who was sent by the Kaliff Mahommed Ameen Billah to discover the Mountain Kokaiya, with the bank or rampart of Yajuj and Majuj, who dwelt to the north of that range, and who were confined within by a great gate of iron, 50 cubits high, supported by great buttresses, with an iron bulwark reaching to the summit of Kokaiya, almost beyond the reach of vision. The people of Yajuj are represented by Edrisi as of the usual size, but those of Majuj as only three spans high, or a nation of pigmies. Kokaiya seems to be the Ulugh-Tagh, or great mountain running south-east from the Ural-Tag, and dividing the Steppe of Isim from the middle horde of the Kirgees.

A general map of Edrisi, taken from an Arabic copy in the Bodleian Library, is published by Vincent in his illustration of the *Periplus of Arrian*. Like Ptolemy, Edrisi and the Arabian geographers in general, imagined that the south parts of Africa and Asia joined; the former, running north-east to India extra Gangem. They also supposed the north-east part of Asia to run north-west from the northern part of the Yellow Sea, to the mouth of the Oby, whose principal branch, the Irtysh, seems to be the Almashar of Edrisi, running through the interior part of Yajuj and Majuj. This is the opinion also of Ebn-al-Wardi and Abulfeda, who says, that the ocean bends northward, and in its progress shuts up the eastern quarter of China, till it faces the rampart of Yajuj and Majuj. So that, by this system, the great body of Siberia, and the whole of Eastern Tartary, were unknown to the Arabian geographers. Edrisi tells us that the land of Yajuj and Majuj is full of cities, cultivated lands, and exceedingly populous. Yet he says, in another place, that beyond the Mountain Kokaiya, which he makes to surround that region to the south-west and south, are found no dwellings, nor any living creature, by reason of the intense cold. How therefore, could it be full of cities, people, and

cultivated lands. Edrisi represents the Calmucks as adorers of fire, and their king, or khakan, as equal to the greatest monarchs for power and grandeur. So great is the ignorance of Edrisi, that he not only confounds all the Tartar tribes under the common name of Turks, but also makes Khakan the name of every chief city of every region possessed by them. His African geography is very erroneous, though it must be admitted that he communicated more knowledge of its interior than all who had preceded him. He places the sources of the Nile, like Ptolemy, in the Mountains of the Moon, in 16° south latitude, or more than 20° south of its real sources, and carries them through three lakes successively, to the equator, and from the last of these derives the Niger, or Nile of the Negroes, which runs north-west, and the Egyptian Nile, running north-east. He describes the Caspian as an inland sea, under the name of the Sea of Khazar, and mentions the Lake of Aral, under the appellation of the Sea of Khowarasm. He describes the ocean as open and navigable round by the north from China to Norway and Great Britain. He places this ocean to the east of the Calmucks (Kaimakiens) and calls it the Sea of Darkness. The curious reader who wishes farther information of Gog and Magog, or Yajuj and Majuj, may consult the celebrated D'Anville's geographical dissertation on their supposed position, in the 31st vol. of the *Memoirs of the Academy of Inscriptions and Belles Lettres*, and Rennel's *Herodotus*.

After Edrisi, came Ebn-al-Wardi, whose geographical work, entitled *Kharidat-al-Gaiab*, or the admirable Pearl, appeared in one volume, 4to, in 1232, A. D. In this work, Africa, Syria, and Egypt are minutely described, but Europe, India, and the Northern Asia are but superficially so.

Nasroddin-al-Toosi, a native of Toos, in Khorasan, a little to the north of Meshed, flourished in the year 1260, in the reign of Hulacu the Tartar, who was his great patron. This personage was a celebrated mathematician and astronomer. He travelled through many provinces of Asia for geographical information; and his knowledge of such countries as he did not visit, he derived from the most approved Arabian geographers. On the astronomical observations which he made, and the information he derived, he constructed astronomical tables, from which one of latitudes and longitudes was extracted and published by Greaves, in 1652, and republished in Hudson's *Min. Geogr.* vol. 4th. In these, the longitude is computed from the Fortunate Islands. But his longitudes are generally erroneous, and in many instances his latitudes. His geographical table contains five columns, perpendicular. The first contains the names of kingdoms and provinces; the second, those of cities and towns of note; and the third and fourth contain the latitudes and longitudes; and the fifth the climates. The longitudes and latitudes of 248 cities, all of which, except 18, are Asiatic, are ascertained. The 18 belong to Africa. Under the patronage of Hulacu, a royal observatory was erected at Maragha, in Aderbijan, on the eastern side of the Lake of Oormeeah, and Nasroddin was appointed chief astronomer, who carried on a series of astronomical observations at that place for two years.

Other geographers succeeded, as Al Bergendi, Al Faras, Mahlabi, and Yacut Hamavi, whose work is entitled *Moagem-al-Buladan*, or the alphabet of Cities. But the most eminent of all the Arabian geographers is the celebrated Abulfeda Ismail, prince of Hama, in Syria, a descendant of the famous Salahaddin, and the glory of the house of Ayoub. He died in 1345, A. D. His great geographical work is entitled *Takwim-al-Buladan*, or the Description of Countries. He composed this treatise to supply the deficiencies and correct the errors of the Arabian geographers who preceded him. If we can trust him, no great information is to be derived from them, for he declares that he had perused them all, and found nothing in them that gave him satisfaction. He accuses them all of erroneous orthography in the names of places, and of mistakes in the longitudes and latitudes, which has compelled him, he says, to collect and correct whatever has been dispersed in these authors, yet without pretending to mention all the cities in the world, or even the greater part of them, because all the books which have been written in this science contain but a very small number of them. This is owing, he says, to the carelessness of those authors who have described only the countries of the Mahommedans, as if other regions were not worth describing, because belonging to princes and people who do not profess the religion of Mohammed. "For instance," continues he, "the accounts of China received from travellers and navigators, are either defective or false. Those of India doubtful, confused, or fabulous. Almost all the kingdoms from the Thracian Bosphorus to the Atlantic Ocean are almost unknown, and respecting interior Africa, as Negroland, Nubia, Abyssinia, Tochrur, Zayla, &c., I have been able to collect nothing of importance. The same is the case with the north of Asia and Europe." After having prefaced his work with this general and just censure on preceding oriental geographers, he remarks, that, "notwithstanding this deficiency of information, it is better that one know a part than be ignorant of all, and not abandon the study of a thing entirely, because one does not know it perfectly." In his introduction to the work, he enters on the subject of mathematical geography, and then describes the world in general, and its most celebrated mountains, rivers, and seas. He has there given an account of 628 countries, besides those marked in his tables, in the order of climates, as laid down by Ptolemy. In his tables of longitude and latitude, he computes the former from Ceuta, on the African coast, opposite Gibraltar, at the foot of Mount Abyla, one of the Pillars of Hercules, in preference to the Fortunate Islands, the first meridian of Greeks, Latins, and the greater part of Arabian geographers. In adopting the system of climates, Abulfeda used a mode different from that in use among Greek, Arabian, and Persian geographers, who divided the latitude of the known globe into seven climates. In addition to this division, he added 28 artificial climates, denoting thereby the countries which he described. One artificial climate sometimes contains a portion of one fixed or natural climate, and sometimes comprehends part of two or more climates. Syria, for instance, is ranged under one artificial climate, though containing part of the third and fourth fixed climates. He has taken great pains in ascertaining the orthography of such places as he describes; the longitude and latitude of each

city and town is given, with the authorities on which these are fixed. Even for the most trivial facts he has adduced his authorities. In fact, Abulfeda must be viewed chiefly in the light of an industrious compiler, who collected what he has given from the best authorities he could procure amongst his oriental countrymen; and unless where personal knowledge is concerned, his mistakes in point of longitude and latitude are to be referred to those authorities on which he depended. His descriptions, especially of Syria and the adjacent regions, are circumstantial and correct. In fixing the sources of the Nile, he closely follows Ptolemy. In his preface, article *rivers*, speaking of the Nile, he says, that "it springs from those deserts which are south of the equator; wherefore it is difficult for us to investigate its sources; of which, as of the whole river, we are indebted to the Greeks for all our knowledge." A very candid confession of oriental ignorance. His geographical information respecting the peninsula of Africa is correct, as he makes it every where surrounded by the ocean, except at the Isthmus of Suez, and admits the junction of the Atlantic, called by him the Ambient Sea, with the Indian Ocean, which Ptolemy and Edrisi denied. But, like his master Ptolemy, he curtails Africa of at least 10° of its longitude westward, supposing the coast to wind almost directly south in the parallel of 36° north latitude, placing the Arsinarium Promontorium, or Cape Verd, its most western projection, in nearly the same longitude with the Strait of Gibraltar. Of all other parts of Africa, except Egypt and the north coast, he gives little information. Spain is the only kingdom described by him in Europe. Of Siberia he knew nothing, did not even suppose it to exist, for the ocean, with him, turned north from the Yellow Sea, or Gulf of Peking, till it faced the rampart of Gog and Magog, in 50° north latitude; "thence," says he, "it bends westward, passing by regions of which we are ignorant; and having passed the territories of the Russians, it takes a south-west direction, and then westward along the coasts of various infidel nations, till it comes opposite to Italy on the west." Of course, all Asia, to the east of the parallel of Peking, the source and course of the Irtysh, was unknown to Abulfeda and the rest of the oriental geographers. His knowledge of China is not near so full and minute as might have been expected, considering the intercourse of the Arabians with that extensive and commercial region. At the commencement of the eighth century, Arabian ambassadors were sent to China, by the way of Cashgar. Journeys to China by Samarcand and Cashgar were subsequently frequent. Besides, Canton was visited in the 9th century, by the two Arabian travellers whose journey has been translated by Renaudot. Other cities, chiefly in the interior, were visited by these adventurous merchants, yet all we learn from the oriental geographers is, that China was divided into north, called Cathay, and south, called Tchian, or Sin, an appellation frequently extended to all the Indo-Chinese nations east of the Bay of Bengal. India became known to them by the successive and successful conquests of the Gharnevide and Ghaurian Sultans, and was divided by their geographers into Western India, called Belad-al-Sind, or the region of the Indus; and Belad-al-Hind, or the eastern part towards the Ganges; and their geographical knowledge of the maritime coast terminated at Cape

Comorin. So that their knowledge of India was not so full and particular as that of Ptolemy. Of Khovaras and Mawalnahar, Abulfeda has given a full and circumstantial description, as also of Arabia. His geography of these extensive and interesting regions has been translated by Greaves, and inserted by Hudson in the 4th vol. of his *Minor Geographers*. His geographical tables of Syria have been translated by Kochler and Reiske in 1766, with notes and illustrations, into Latin, along with his Introduction. His description of Egypt has been translated into Latin, with notes, &c. by the late celebrated Michaelis of Gottingen, in 1776, and large excerpts from his geography have been made by the learned Schultens the elder, and appended to his life of Saladin, translated from the Arabic, in order to illustrate the marches and conquests of that Sultan, so celebrated in the wars of the Crusade. The geography of Abulfeda was also translated into the Turkish language, by Sipahi Zade, and dedicated to Sultan Morad.

The last who closes the succession of oriental geographers, is the famous Ulugh Beg, grandson of Timur Beg, and who reigned at Samarcand from 1447 to 1450. This prince was passionately fond of the mathematical sciences; and whilst he resided, during the life of his father Shah-Rokh at Samarcand, applied himself to the study of astronomy. For the purpose of assisting his studies, he founded an academy, built an observatory, and constructed astronomical instruments of extraordinary magnitude, particularly a quadrant and gnomon, both of prodigious dimensions. He sent for the most celebrated astronomers from the neighbouring countries to aid him in his observations on the longitudes and latitudes of the planets. It was under his name and auspices that the famous tables called *Zij Ulugh Beg*, or the *Astronomical Journal of Ulugh Beg*, were published in 1437, by Al Kushji, who had in reality the greatest share of the work. In these tables, the longitudes and latitudes of several places were corrected, and the arrangement is the same as that of Nasroddin-il-Tossi. The whole work entitled *Marifat-al-Tawarikh* consists of four parts: chronology, geography, longitudes and latitudes, and the celestial motions. In this table, however, many gross errors remain. The longitudes are calculated from the meridian of the Fortunate Islands; but not a few of them neither correspond in his tables, nor in those of Nasroddin, with this meridian, nor with that of Ceuta in Abulfeda.

It was the great misfortune of the Arabs, that during the most enlightened period of their domination, which lasted upwards of 500 years, they were ignorant of the remote parts of the earth; of the form, magnitude, and contents of every kingdom in Europe and Africa, their own dominions excepted. This, as we have seen above, was the honest complaint of Abulfeda. Ulugh Beg, who corrected the observations of others, places Rome $4^{\circ} 23'$ west of Constantinople, whereas the latter is $10^{\circ} 28'$ east of the former. He places Rome $55^{\circ} 27'$ east of the Canaries, whereas it is only $30^{\circ} 7'$ east of that meridian. Athens is placed by him 50° east of Constantinople, though it be really $5^{\circ} 2'$ west of that city. He places the mouth of the Indus 102° east of the Canaries, or 15° too much. Cashmere is placed in nearly the same longitude as the above, though it be about 9° east of that position. What were the causes of this ignorance? Pride and fanaticism.

In the former, the Arabs shared with the Greeks, whilst the latter was peculiarly their own. That the Greeks were very proud both of their language, literature, and philosophy, is true; and it is equally so that they despised all other people as barbarians, and disdained to have it so much as thought that they were indebted for any of their knowledge to the surrounding nations. But if there can be a reason at all for national pride, the Greeks had it; for what were they to learn either from their proximate neighbours, or from the Orientals or Scythians. Unless it were the science of judicial astrology, what were they to obtain from the Babylonians, Persians, and Parthians; for whatever may have been magnificently said of the observatory of Babylon, and Babylonish astronomy, it does not appear that these star-gazers ever communicated, or had any thing worth communicating to the Greeks. There is no proof that any tables of longitudes and latitudes were ever constructed at Babylon, or even that its position relatively to any given point was ever determined by these star-gazers, who never seem to have gazed to any useful purpose. On the other hand, the Greeks had become the preceptors of the Romans, their conquerors, who frankly confessed their prodigious inferiority to their Greek subjects, in every thing that expands or ennobles humanity. They saw that they had much to learn, and the Greeks much to teach, and therefore diligently applied themselves to the cultivation of Grecian learning and science, and became in their turn possessed of all the knowledge of their instructors. But it was otherwise with the Arabians, when they obtained the sovereignty of the east. Proud of their language, and confident of the copiousness of its diction, they disdained to learn any other, and thereby deprived themselves of all knowledge of past ages. They were too proud to learn the language of their Greek or Latin subjects. Not a single Greek or Latin poet, orator, or historian, ever appeared amongst them in an Arabian dress. They were profoundly ignorant of all the polite literature of Greece and Rome, and of all history that preceded Mohammed, but what that impostor had borrowed from the Jewish scriptures, and mixed up with his pretended revelations. In fact, all Mohammedan history and chronology of the world before the era of that pretended prophet, is confined to a meagre legend of the patriarchs, the prophets, and the Persian kings. In the eyes of the Moslems or true believers, the Greeks and Romans were *djours*, or infidels, whether they were Christians or Pagans; and their language and literature were accounted profane. Of consequence, as the Arabians from pride and bigotry refused to be acquainted with the language and history of all other nations but those who professed the true faith, they were equally ignorant of their geography. To use the style of that pious Moslem Ebn Hawkal, the love of wisdom and religion could not suffer them to notice such people (the *Djours* or infidels) as these, or exalt them by inserting an account of their countries. Under the influence of such feelings, the geographical knowledge of the Orientals could not fall of being extremely limited. Excepting the countries immediately under Mohammedan sway, the oriental geographers knew little, and they were too proud and bigoted to learn more; in mathematical geography, they made no improvements beyond those to be found in Ptolemy; and their geographical tables, constructed at successive periods, from Al Fargani down to

Ulugh Beg, by no means deserve that confidence which has been placed in them by modern geographers, being almost wholly founded on the basis of itineraries, and are only of use in some cases where better materials cannot be had.

Still, however, the Arabians, during the middle ages, were vastly superior to the Christians of the Greek empire, and of Europe, in the sciences of medicine, chemistry, botany, mathematics, algebra, astronomy, and geography. For ages subsequent to the destruction of the Roman empire, Europe was involved in worse than Cimmerian darkness; and it is a humiliating circumstance, that to the Saracens or Moors of Spain the Christians were compelled to be indebted for what little of science was then possessed. The history of that industrious, ingenious, elegant, and gallant people, has been grossly falsified by Christian writers, who have traduced them as rude and barbarous, while they far surpassed them in the elegant and useful arts. To say the truth, the Christians of Spain conquered, persecuted, and barbarously expelled a race of people far more industrious and accomplished than themselves; and with all the advantages to be derived from the improvements of modern times, the Spaniards have remained a proud, lazy, bigoted, ignorant, priest-ridden race, and have never equalled the people whom they expatriated.

In the 12th century, Christian monks travelled from other countries to Spain and Africa, to learn geography. We need not wonder at this, when informed that the Omniade Khalifs of Spain had collected a library of 600,000 volumes, 44 of which were employed in the catalogue itself, and that above 70 public libraries were opened in the cities of the Andalusian kingdom. In the library belonging to the Fatemite Khalifs at Cairo, the MSS. of astronomy and medicine amounted to 6,500, with two beautiful globes, one of brass, the other of silver. In the course of successive intercourse with the Saracens of Spain and the East, the Christians became convinced, that in the three sciences of medicine, astronomy, and geometry, the disciples of the false prophet were far their superiors. A taste for these was formed, the memory of ancient discoveries began to revive, and a spirit of emulation with their Mahomedan rivals was excited. Alphonso the Wise was the first Christian prince who was propitious to science. Under his auspices, the Alphonsine tables were constructed and published. But still he paid no attention to geography, for, like some of his predecessors in the path of astronomy, he was too much taken up with the heavens to mind the earth.

Though the discovery of the mariner's compass, and the attractive power of the magnet, served mightily to improve the science, and aid the practice of navigation; though the perusal of the geography of Abulfeda stimulated Prince Henry of Portugal to the prosecution of naval discoveries along the coast of Africa, till its circumnavigation was finally accomplished, in 1498, by De Gama; and although the discovery of America, combined with the discoveries of the Portuguese, had opened up a vast field for geographical research, yet none appeared till the conclusion of the 15th century, and commencement of the 16th, when Francis Berlinghieri of Florence composed, in 1470, an Italian poem, in six books, containing an explanation of Ptolemy's geography, illustrated with maps engraved on copper. In 1550, James Castaldo, a Piedmontese, constructed maps of the world, of Asia, Africa,

Europe, and several kingdoms, relying chiefly on the authority of Abulfeda. A number of others appeared, whose names it is needless to mention, as their works, extracted from Greek and Arabian authors, and from the reports of ill-informed and credulous writers, have long descended to the tomb of oblivion, and are never consulted by the learned, unless, perhaps, Louis Teixeira.

The most celebrated geographers in the 16th century, were Munster, Mercator, Ortelius, and Maginus. The cosmography of the first was published in 1550, in a folio of 1,330 pages. Munster was a great man for the age in which he lived, both as an oriental linguist and a man of science. His work consists of six books, the first of which contains an epitome of Ptolemy's first book of geography, with some general remarks on the form and dimensions of the earth, whose circumference he makes 5,400 German miles. Europe occupies the three succeeding books, Asia and America the fifth, and Africa the sixth. The descriptions of places are circumstantial and ingenious, but inaccurate. The maps are the rudest possible, having neither latitudes nor longitudes expressed on them, nor any proportion in their parts. He supposes the Caspian Sea and Persian Gulfs to extend east and west, instead of north and south. India, as might be expected, is very superficially described; and his detail of Africa is chiefly from the ancients. America was then but very imperfectly known; but his details of the voyages of Columbus and other navigators is curious and interesting. Still, with all its faults, it is a work of merit, considering the time in which it appeared, and the scanty information which was then possessed by even the best informed.

Gerard Mercator may be justly styled the father of modern geography. He published an edition of Ptolemy, in which he pointed out the imperfections of the geographical system of the ancients. He constructed a map of the world on a new plan. Those of the ancients were very rude, for meridians were represented as parallel lines, and degrees of longitude were equal to those of latitude, so that meridians and parallels made exact squares. But his method consisted in laying down a spherical projection of the globe on a plane, in such a way that the places marked according to their longitudes and latitudes should bear the same relation to each other, as if delineated on a globe. This method has obtained the name of Mercator's chart. The principles of the construction of such a map were not demonstrated till 1590, when Wright, an Englishman, pointed them out, as well as an easy and ready way of making such a map. This was a vast help to navigation, since, by enlarging the meridian line, as Wright suggested and explained, so that all the degrees of longitude might be proportional to those of latitude, a chart on Mercator's projection shows the course and distance from place to place in all cases of sailing; and is therefore, in some respects, more convenient to navigators than a globe itself. In 1549, Mercator published a map of Palestine, and soon after, one of Flanders, which he had engraved. He presented to Charles V. two small globes, one of which was crystal, and the other wood. On the former he traced with a diamond the zodiacs and the principal constellations; and on the latter he delineated the surface of the earth. A reader may perhaps ask, Why was the celestial globe made of crystal, and the terrestrial of wood? It was the general opinion of the

schoolmen and philosophers at that time, that above the clouds was situated the crystalline sphere, and that it was composed of water above the clouds, of a very subtle nature, which was congealed like crystal, turned into a very brilliant and clear substance, and placed there for the ornament of the universe, and to ravish the eyes of the blessed—the crystalline fluid, surrounded with empyrean light, producing the most beautiful forms with which the eyes of the blessed are constantly delighted. Mercator also published, in 1555, a map of Europe. In 1585, he finished an atlas, containing several maps of France and Germany, to which were afterwards added several maps of Italy. This was not published till after his death, by his two sons, in conjunction with Hondius, an eminent cosmographer and engraver. With all his geographical knowledge, Mercator was so absurd as to suppose the existence of a vast rock in a large basin at the north pole, projecting four branches, two of which were inhabited by pigmies of four feet high.

Ortelius, contemporary with Mercator, directed his studies and learning to the elucidation of ancient geography, in two works, entitled the *Theatre of the World*, and the *Universal Dictionary*, in both which extensive knowledge and profound erudition are displayed. But Greek and Latin writers were alone consulted, and he had little knowledge of the geography of the middle ages, and was apparently unacquainted with mathematical geography. In 1595, Maginus, mathematical professor at Bologna, published a system of ancient and modern geography, in 2 vols. 4to, the first containing a translation of Ptolemy's work, with a judicious commentary, illustrated by 27 maps; the second comprehending an actual description of the whole world, accompanied with 37 maps. The historical part of this work abounds in the marvellous, and the maps, as might be expected, are very defective and incorrect. Constantinople is placed near 100° too far east, and the Cape of Good Hope occupies the 40th degree of southern latitude. Cape Romania, in Malacca, is 83° too far east; the Caspian retains its ancient form; the Jaxartes is made to run west more than 30° from the desert of Lop, and the form of India is deplorably erroneous. The western American coast is made to approach Japan; and the whole of Siberia is included in Tartary, in the most northern part of which he places the tribe of Naphtali. But these errors are more those of the age than of the man.

In comparison with the labours of Philip Cluverius, a native of Dantzic, those of Ortelius and Ferrarius bear almost no proportion, so far as ancient geography elucidated by modern is concerned. This distinguished person spoke ten languages with facility, and noted whatever seemed worthy of observation. He published a map of ancient Italy, in 1603; and soon after, his learned work on the mouths of the Nile. His *Germania Antiqua*, 2 vols. fol., and his *Italia*, *Sardinia*, *Corsica*, and *Sicilia Antiqua*, are proofs of his vast erudition; and whether we view their ancient geography, or their respective tribes, nothing equal has yet appeared. He meditated an account of ancient Gaul and Greece, but his premature death, in 1623, in the 43d year of his age, deprived the literary world of the result of his farther labours.

All that Cluvier was in Germany, Camden, the learned antiquarian, was in Britain. His *Britannia Illustrata* is a stupendous monument

of erudition and labour, and is the grand source whence all succeeding antiquarians have derived their information concerning the ancient geography of our island. It was first published in 1586, and in the course of four years subsequent, underwent three editions at London, two in Germany, and another in London, in 1594. It was translated by Philip Holland, in 1610, and by Bishop Gibson, in 1694, with large additions. That published by Gough, in 3 vols. folio, is the best and most complete. His account of Scotland and Ireland, however, is very concise, containing little else than etymological and genealogical disquisitions.

The first map of Britain that was ever made, was done by Richard of Cirencester, who flourished in 1340. This map, which properly represents Roman Britain and Caledonia, along with the ancient history of Albion, the name he assigns to this country, was not discovered till the year 1757, when it was found in Denmark, and published at Copenhagen. In this map, the space between the Wall of Adrian, in Northumberland, and that of Antonine, between the Firths of Forth and Clyde, is named *Valentia*. The space north of this, to the lakes stretching across the island, from the Moray Firth to Loch Linne, he calls *Vaspassiana*, beyond which is *Caledonia*. The map and description seem to be chiefly from Ptolemy.

Robert Salmò, a Guernseyman, who died in 1545, is our oldest general geographer, and George Lilly, son of William, the famous Latin grammarian, published the first exact map that ever till then appeared of our island. But it must be observed, that till the commencement of the present century, the distance from the South Foreland to the Land's End, was laid down in all the maps of England half a degree more than the truth. In some of the MSS. of Harding's Chronicle, written in the reign of Edward IV., is a rude map of Scotland. A very accurate chart of Scotland and the Isles, considering the age, was drawn up in 1539, by Lindsay, an excellent navigator and hydrographer, when he accompanied James V. on his voyage to the Highlands and Islands, and is much superior to that published by Bishop Lesley, in 1578. The first map of Russia known to the other nations of Europe, was made by Anthony Jenkinson, in 1563, agent to the English Russia Company, from the result of his own observations and inquiries during his long stay in that empire. The first general map of Sweden was published in 1626, by Bureus, at the command of Charles IX., and is a good map for the time, being the result of much labour and observation. A large topography of Germany, in 5 vols. folio, was published by Merian of Frankfurt, A. D. 1637-1654. It is sufficiently methodical, and tolerably accurate, but does not display that ingenuity and erudition which appear in the works of a Cluvier or a Camden. An atlas, in 3 vols. folio, was constructed and composed in 1628, by William Jansen Blenu, the friend of Tycho Brahe, which was well received. Another edition of the same, in 4 vols. folio, was published in 1663, by his sons, Cornelius and William, who sustained the fame of their father. In 1650, appeared the geography of Bernard Varenius, an eminent mathematician, astronomer, and natural philosopher. His attainments in these sciences admirably fitted him for producing a system of universal geography. This work was by far the most scientific that had ever appeared on the subject, and Malte

Brun reckons him one of the best geographers of the 17th century. Even Newton himself was so pleased with it, that he deemed it worthy of a republication, with additional notes. It is wholly a work of geographical science, wherein the principles of astronomy and mathematics are applied for the purpose of demonstrating and illustrating its leading truths. The whole work is divided into three books, and forty chapters. The first contains the absolute geography of the earth; the second, its respective, or astronomical geography; and the third, its comparative geography. It has been translated into English, and undergone several editions, the best of which is that of 1733, in 2 vols. 8vo. This production, as a work of pure geographical science, may have been equalled, but has never been surpassed.

John Baptist Riccioli, an Italian Jesuit, an eminent astronomer and mathematician, was the contemporary of Varenus. Sensible of the imperfect state of geography, he attempted to reform it by the aid of astronomy. With this view, he published, in 1661, in Latin, his *Geography and Hydrography Reformed*, in 12 books, the title of each expressing its subject. The subjects handled successively are the following:—General division of the earth and ocean—measures of the ancients and moderns—extent of countries, with their itinerary distances—geometrical mensuration—methods of measuring a degree of latitude, and computing the circumference and magnitude of the earth—the art of measuring heights, as mountains, clouds, &c.—polar altitudes, latitudes, climates, &c.—methods of ascertaining longitudes—tables of longitudes and latitudes, ancient and modern meridians—the doctrine of the tides, and the art of navigation illustrated—copious list of places, alphabetically arranged—method of constructing and using the geographical cross, with an appendix, containing a computation of the population of every kingdom, and of the globe universally, the amount of which he supposes not to exceed 1000 millions. All these topics are treated judiciously and methodically, though the illustrations are sometimes tediously minute. It is perfectly clear, from the enumeration of topics above mentioned, that, compared with the systems of Varenus and Riccioli, the geography of Ptolemy is a mere skeleton, and those of the Orientals not worth mentioning. But it is equally so, that these works are not adapted for general use, but for those who study geography merely as a science.

The examples of Cluvier and Camden stimulated others to the task of illustrating the geography of the ancients by modern geography, as Bochart and Briet, Valesius, Palmerius, and the elder Sanson. In 1646, appeared the *Phaleg* and *Canaan* of the first, who was a minister of the reformed church at Caen in Normandy. Samuel Bochart may be justly denominated the most learned man of the most learned age the world had yet seen. This extraordinary person, instead of wasting his time, talents, and learning, in acrimonious controversy, and polemical gladiatorialship (the prevailing vice of the learned in that age) like Salmasius and Petavius, Capellus, and Buxtorfius, Voetius and Maresius, applied himself, with all the vigour of a mind richly stored with philological lore and acquired knowledge, to illustrate the geography and natural history of the sacred Scriptures. His *Geographia Sacra* consists of two parts, entitled *Phaleg* and *Canaan*, the former treating of the dispersion

of the descendants of Noah, subsequent to the building of the Tower of Babel, being a geographical commentary on the 10th chapter of *Genesis*, and the latter, of the Phenician colonies settled in various parts of the earth. The *Phaleg* is divided into four books. The first book, properly speaking, is an introduction to the *Phaleg*, illustrating the history of Noah and his three sons, in which he endeavours to ascertain the place where the ark was built, and where it rested consequent on the cessation of the deluge, treats of the construction of the Tower of Babel, the plain of Shinar, confusion of tongues, and subsequent dispersion of the human race. In the second book, the posterity of Shem are traced out in Assyria, Chaldaea, Elymais, Armenia, Mesopotamia, Arabia Felix, and part of Asia Minor. In the third book, the posterity of Japheth are traced out in Media, Iberia, Moschia, Cappadocia, Paphlagonia, Phrygia, Thracia, Greece, Italy, Gaul, Spain, Cilicia, part of Asia Minor, and the Isles of the Archipelago. In the fourth book, he proves by historical induction, that the posterity of Ham peopled the greater part of Africa, with part of Syria, Palestine, Arabia, &c. The second division of the work, entitled, *Canaan*, is a laborious, ingenious, and erudite attempt to investigate the progress and various settlements of the Phenicians in different parts of the world. This division consists of two books, the one treating of the colonies, and the other of the language of the Phenicians, proving it to be a dialect of the Hebrew. It may be said that he has traversed the whole field of ancient geography and history, in search of the Phenicians, and finds traces of them in almost every region of the world known to the ancients. Uncommon abilities are displayed in every part of this erudite work: the reader is amazed at the extent of learned research shown by the author, and the immense store of Oriental and classical quotations brought to bear upon the subjects discussed. The work, however, has its imperfections. Strained and fanciful etymologies are not seldom adopted, inconclusive reasonings as frequently introduced, and illogical conclusions drawn. The abuse of etymology is a foible of the learned, and the variety and extent of Bochart's philological attainments enabled and perhaps disposed him to indulge in it. His geography is in many instances and respects erroneous, especially his longitudes and latitudes. The cause of this was his too great dependance on Ptolemy, and his deficiency of information in Asiatic geography. In this department he had no other guides, but the ancients and Edrisi. From such scanty materials as those, it was impossible that Bochart or any other, even as learned as he, could throw much light on the geography of the East, so far as it is connected with divine revelation. Bochart only failed in this respect for want of that modern information respecting the geography of Asia which we now possess; and consequently, his errors are to be imputed to the low state of geographical information which then existed. With all its faults, however, it is an *Opus Egregium*, and may be considered as the most profound geographical production that has ever appeared. The original edition of the *Geographia Sacra*, in 1646, contains near 900 folio pages, but abounds in typographical errors, which were corrected in a succeeding quarto edition, published in 1681. In a work so replete with multifarious erudition and learned discussion, and containing such a host of names of nations, persons, places, and things, in Hebrew,

Arabic, Punic, Persic, Chaldee, Syriac, Celtic, Greek, and Latin, a multitude of typographical errors must have occurred in a first edition. But the most correct edition of the *Geographia Sacra*, and Hierozoicon, is to be found in that published by the learned John Leusden, of the works of Bochart, in 1700, in 2 vols. folio.

Briet was a Jesuit, and librarian of the university of Paris. In 1648, he published his *Parallels of Ancient and Modern Geography*, but the work is incomplete, as it went no further than Europe, and the maps are of little value. Great errors are committed with respect to the itinerary measures of the ancients, eight stadia are always supposed to a mile of direct distance, and no distinction is made of different stades at different times, and in different places, nor between road and horizontal distance. He gives the ancient divisions of the various countries of Europe, down to the time of Constantine, with the modern divisions and nomenclature, but still there is no illustration of the physical part of geography attempted—no detail of rivers and mountains is given, and nothing is mentioned in the subdivision of provinces but the names of places.

Valesius and Sanson gave the *notitia* of ancient Gaul, Palmerius illustrated great part of the ancient geography of Greece. No writer, however, of eminence, had yet completed a survey of the ancient world. This arduous work was reserved for, and accomplished by Christopher Cellarius, who performed it with fidelity and exactness, in A. D. 1703, in 2 vols. 4to, entitled *Notitia Orbis Antiqui*. All the passages in ancient authors that respect the subject are quoted, after the example of Cluvier. But as the plan descends no lower than the time of Constantine, the geography of the middle and lower ages are wanting. An epitome of the work has been published by Bishop Patrick. The fame of Cellarius as an enlightened and faithful guide in ancient geography continued till the time of D'Anville, whose superior reputation both in ancient as well as modern geography so completely outshone it, that his work is almost no longer consulted.

As Rollin observes, Sanson was deemed an eminent geographer in his day, and his maps were highly esteemed. But they were far from being accurate, as he was not furnished with a competent number of observations, nor sufficiently profound in his researches. He copied some of Ptolemy's errors, and committed more of his own. He was too hasty in his compositions, and too careless in correcting what he had published. The source of the Nile is fixed south of the equator; and the Mediterranean Sea, with the regions adjacent, are extended beyond their true dimensions. India, Tartary, and China are very incorrectly delineated. The labours of Sanson terminated with his life, in 1667, but he left two sons, who inherited his fame, and published several geographical productions. Other geographical works successively appeared, as the *Atlas* of Father Scherer, in 1696; the *Geographical Dictionary* of Cornelle, in 1708; that of De Varea, in 1713, in two vols. folio; and the *Great Geographical and Critical Dictionary* of Martinieri, in 10 vols. folio, in 1726; besides the geographical productions of Reiske, Luyts, and Moll, in Holland; and Witsen's *Geographical Account of the Northern and Eastern parts of Europe and Asia*, with a large map of these regions, and those of Hauber, Hubner, Stats, Zeitung, and Ebeling. But they are all mere

compilations, executed with labour, and may more properly be denominated *mengre*, indigested histories of the world, interspersed with a few patches of real geographical information by the way, too bulky for common use, and quite incompetent to give satisfactory information on subjects of mathematical and physical geography to men of science and information.

Though Mercator may be called the father of geographical science, yet, strictly speaking, mathematical geography, even though its principles were well understood and illustrated by Varinius and Riccioli, was not studied with the attention it deserved and required, till the commencement of the 18th century; and till that period no maps hitherto constructed could be said to be at all accurate. The obvious causes were, want of observations, deficiency of materials, imperfection of instruments, and the imperfect state of astronomical science. If the positions of all the principal places were founded on astronomical observations, and if the intermediate distances were geometrically ascertained, an exact map could be easily constructed. But if these are wanting, no learning, however great, no industry, however unremitting, can compensate the defect. The longitudes during this long period were not at all accurately fixed. Observers of latitudes were but few, and were for the greater part stationed in the principal cities of Europe. The positions of many towns, the courses of rivers, and the forms of sea-coasts, were but very vaguely ascertained, by the rude estimates of travellers, the imperfect computations of journalists, and the incorrect observations of navigators. By the aid of literary measures, such as those of the Roman roads, the ancients estimated the distances of places with some degree of precision; but modern measures, being more various, and differing widely from each other, have not, and could not obtain an equal degree of precision. The Roman roads were much better than the modern, in respect of durability and straightness, especially in Italy and Gaul, and consequently gave the ancient geographers advantages which the modern geographers wanted. But in the 18th century, these defects began to be removed. The most essential improvements originated in France. Societies were formed, voyages were undertaken by order of the sovereign, Louis XIV., accurate observations and surveys were made, the result of which was an almost geometrical knowledge of many parts of the globe. The labours of Picard, La Hire, Cassini, Maupertuis, Bouguer, and Condamine, paved the way for a more exact geography than the world had yet seen. The discovery of the eclipses of the satellites of Jupiter, and their utility for fixing longitudes with precision, belongs to the elder Cassini. In consequence of this, the longitude of the Mediterranean was shorn of that enormous length which Ptolemy and almost all succeeding geographers had assigned it. In 1694, geography was also materially improved in consequence of the famous controversy between Newton, and Cassini, and Huygens, respecting the sphericity of the globe, whether it was a prolate or oblate spheroid, which controversy was continued till near the middle of the last century, by the mathematicians and natural philosophers of the Continent and England.

The celebrated William de Lisle was the first who applied the improvements of astronomy to geography. He was born in 1675, and was the son of Claud de Lisle, a preceding geographer

but of little eminence. During the early part of his life, he made rapid progress in the study of this science, and constructed several maps, in which many former errors were corrected, and the limits of countries ascertained with precision. The Mediterranean was shortened in its length, and its coasts considerably reduced in latitude. The Asiatic continent was diminished 500 leagues of its longitude, and other meliorations were made in tracing the course of rivers, chains of mountains, &c. The figure of the Caspian was nearly determined, in a Memoir, published in 1721. The proper dimensions of Italy, Sicily, and Greece were also settled by this learned and indefatigable geographer, and his maps and globes received with universal approbation. He also published a large and excellent map of ancient Greece, in four sheets. He died in 1726, and an *éloge* was pronounced on his memory by Fontenelle, and published in the Memoirs of the French Academy of Sciences.

In 1714, appeared a learned, elaborate, and accurate description of the Holy Land, composed in Latin, in 2 vols. 4to, entitled, *Palestina Illustrata*, by Hadrian Reland, Professor of Oriental Languages. This learned person was the scholar of the famous Surenhusius, and his work has been the theme of well merited praise by Gibbon and Dr. Clarke. It consists of three books, the first treating of the names, situation, boundaries, divisions, rivers, lakes, mountains, and plains of Palestine. The second discusses the distances from city to city in Palestine, as given in Josephus, Pliny, Ptolemy, Solinus, Diodorus Siculus, Arrian, and the Itinerary of Antonine. He has given a complete list of all the longitudes and latitudes in Ptolemy's tables of Phenicia, Batanea, Galilee, Samaria, and Judea, taken from the 5th book, chap. xv. tab. 4. Asia, as given in Hudson's edition of Ptolemy, in the third volume of the Minor Geographers. It may be remarked, that the numbers in the Hudsonian edition differ widely from those of the edition of Maginus, which abounds in errors of the press. Professor Reland contemplated the construction of a map of the Holy Land, according to the tables of Ptolemy; but had not proceeded far, when he found himself compelled to relinquish the design, upon a further examination of Ptolemy's numbers. "I began," says he, "to make up a geographical map, according to the idea of Ptolemy, and give to each of these cities (those mentioned in Ptolemy) the situation he assigned them, as soon as I could have transcribed this list of cities. But scarcely had I taken down four or five places, when I found, that these could in no way be thus placed, as Ptolemy, or rather his transcribers, who have perverted the numbers marked by him, authorize. For there were places in maritime Phenicia, of whose sites we were certain from Josephus and others, which cannot be placed at all according to Ptolemy's degrees. But when I had proceeded farther, still designing a general map, I was astonished to see places arranged together mutually, which are undoubtedly separated from each other at a very great distance; and on the other hand, places far remote from one another, which I knew to be nigh. In one place, Scythopolis was nearer the lake of Asphalites than that of Tiberias; Gaza more distant from the port of the Gazetes than from the lake of Asphalites; Antipatris more to the east than Jerusalem; and many similar positions, which are fitted not to inform the inspector of a map, but to lead him into the grossest errors; errors

not to be tolerated. For these reasons, I have not deemed it prudent to annex a map here, constructed on the idea of Ptolemy. Whoever chooses may make it, or inspect the published tables of Ptolemy, although I would warn him not to place too much confidence in them; for in these printed tables, the very site of the places themselves is not exhibited with sufficient accuracy, as set down by Ptolemy; yet what is exhibited in the printed tables will be sufficient to demonstrate the truth of what I have said of the errors, which belong either to Ptolemy or his transcribers, and which cannot but render a map of that kind very imperfect. Still, however, Ptolemy is useful to us; because he has preserved the names of the cities and districts."¹ This evinces the candour and discrimination of Reland; and that he was not a slave, as most of the geographers before him, and some even of succeeding geographers were, to Ptolemy. Yet Ptolemy lived in Alexandria, in the vicinity of Palestine, and was, as we are told by Stephanus in his treatise de Urbibus, employed with singular diligence in the description of Arabia, which at that time comprehended a portion of the territory possessed by the Israelites. There is added also, by Reland, at the end of the first volume, a table of longitudes and latitudes, from a manuscript copy of Abulfeda, as discordant and erroneous as those of Ptolemy. Yet Abulfeda lived at Hamah, or Epiphania, in the very vicinity of Palestine, and should have been able to have given us an accurate table. But not one of the numbers there given is his own, being all given on the authority of Al-Biruni, Al-Faras, Al-Haviri, Ibn Said, Kias, and Ptolemy. The third book of Reland's work contains an alphabetical index of all the places in the Holy Land mentioned in the sacred writings, ecclesiastical historians, or the ancient geographers. The basis of this index is the Onomasticon of Eusebius, translated into Latin by St. Jerome, with several additions. This index occupies the whole of the second volume of Reland's work, which, taken in cumulo, is the best geographical account of the Holy Land that has yet been given; and the only desideratum is an accurate knowledge of its modern geography, to correct and illustrate the ancient.

The loss which geographical science sustained by the premature death of De Lisle, was compensated by the acquisition of Jo-Baptist Bourguignon D'Anville, who now commenced his great career. This profound historian and geographer was born A. D. 1697. His passion for geography soon appeared; and his knowledge of it was astonishing. Having carefully consulted every proper authority, he acquired a thorough acquaintance with the state of the globe during the ancient, middle, and modern ages. He attentively marked the changes that have happened in the courses of rivers, the forms of coasts, and boundaries of provinces. He ascertained the positions of places which do not now exist, or whose names have been entirely changed. The revolutions of states and kingdoms, and the political divisions which thence originated, were distinctly traced by his masterly hand. He detected the errors of many writers on these subjects, illustrated various obscure passages of ancient history, and discovered many facts which had been long involved in mystery and doubt. The ancient maps which he constructed are the most accurate that ever appeared; a circumstance

¹ See Relandi *Palestina*, tom. I. lib. ii. cap. xl. p. 466.

the more surprising, as he was neither an astronomer, nor geonetrician, nor traveller. His map of ancient Greece has been pronounced by Mr. Hawkins, who travelled over all Greece, and who, from this circumstance, as well as his intimate acquaintance with the classical geography of that interesting region, to be most accurate, and far more correct than those published by Barbio-de-Bocaque, in the atlas of ancient Greece appended to the *Travels of Anacharsis*. The same character applies to his map of ancient Italy, constructed for Rollin's *Roman History*, especially that of Latium, which was so exact, as to agree in almost every position with the trigonometrical survey of the Papal Dominions made by Father Boscovich. Palestine also and Egypt are accurately designed. Fewer errors have been found in his works, especially in those departments where, for want of facts, a geographer is obliged to use conjecture, than in the writings of any former geographer. We may safely pronounce him to have been the best geographer that ever Europe (and when we say Europe, we may say the world, for what has been the ancient world, or what is the rest of the modern world, to be compared in point of science to it,) produced. His only faults lay in trusting more to translations than originals, and his too frequent use of etymological reasoning and similarity of names, which has led him in several instances astray. His greatest errors lay in his maps of Asia; (but these were unavoidable, from the deficiency of his materials)—as his map of Asiatic Turkey, where he has made the peninsula of Asia Minor too narrow by more than a degree of latitude; and his map of Persia, which is meagre and incorrect; and that of India, which is still worse. In his *General Map and Chinese Tartary*, published in 1734, in *Du Halde's Chinese Atlas*, he reduced the distance between Pekin and Paris full 2½°. The cause of this was his belief in the theory of Cassini, that the globe was a prolate spheroid, which induced him to shorten the degrees of longitude 1-30th each, in conformity to that theory. But this error disappeared in his subsequent maps, when the controversy was decided in favour of Newton. Like his predecessors, he also trusted too much to the oriental geographers, when, for want of observations, he was forced to use their tables. This extraordinary person died in 1782, at the advanced age of 85. He collected, during a period of almost 70 years spent in advancing the science to which he was so exclusively attached, more than 10,000 charts, of which more than 500 were manuscript. The mass of information alone resulting from the combination and collation of these, has put an immense interval between him and all those who have preceded him in the same career. His *Ancient Geography* contains eleven sheet maps Imperial folio; and his *Modern Geographical Maps* amount to 22; Europe, six sheets; Asia, six do.; Africa, six do.; North America, four do.; South America, three do.; India, three do. &c. Besides these, he published 20 geographical treatises on different countries, coasts, and rivers; and 37 memoirs, inserted in the volumes of the *Royal Academy of Inscriptions and Belles Lettres*; and two in those of the *Academy of Sciences*. A translation of his *Compendium of Ancient Geography* into the English language accompanied with maps; and another of *Roman Britain* by Horsley, added by the translator, have been made in two vols. 8vo. A new edition of this work, with such alterations and improve-

ments as the present advanced state of geographical science demands, would prove highly useful. Additional materials for such a work have been amply supplied, and nothing is needed but judgment and discrimination in the collection and selection of these for that purpose.

In 1730, Strahlenberg's four sheet map of the Russian empire and Great Tartary, accompanied with an introduction, explanatory of the map, and a geographical description of the north-east parts of Europe and Asia, appeared. This is a work of great merit for the time, being the first that disclosed the regions of Siberia and Central Asia to the view of Europeans. Strahlenberg was one of those unfortunate Swedish captives at the battle of Pultowa, whom the Czar Peter sent to Siberia, where he remained during a space of 13 years. Being a man of information and curiosity, he applied, with as much diligence and assiduity as the state of his circumstances permitted, to gather materials for a map of the extensive regions therein represented. He travelled over the most of Siberia himself, and spared no pains to collect all the information that could be acquired from the Bucharian merchants, and such Tartars as frequented the fairs of Siberia, respecting the lofty, and till then unknown region of Central Asia. If the difficulties with which he had to struggle be considered, his work is an astonishing effort of perseverance and labour. He had to earn his subsistence by teaching, and had but little to spare out of his penury to procure information from a people who will communicate nothing without money. He was, besides, ignorant of the languages spoken in Siberia by the almost numberless tribes who roam in that extensive region. He acknowledges, that when carried captive to that country, he knew no more of it than an Ostiac knows of geometry; and that his knowledge of ancient history was so defective, that he was under the necessity of studying it during his captivity, to enable him to prosecute his design. Yet these difficulties he overcame, and acquired a wonderful degree of knowledge of the Tartarian languages; as a proof of which, he has given a polyglot table of 32 languages and dialects spoken by these tribes, and a large vocabulary of the Kalmucko-Mungalic language. One great excellence of his map and work, is a correction of numberless errors, which had disfigured all former maps in the geographical nomenclature of the regions he describes. The introduction to his work is ingenious, and displays extensive reading. His greatest foible is his love of etymology. So bigoted is he to this system of explaining doubts and removing difficulties, that, though very happy in many of his etymological conjectures, he takes the smallest resemblance in a word or a noun, as a proof of his point in attempting to trace the origin of people by the names found in ancient historians, or those of foreign countries. From the want of observations of longitude, his distances are often wrong. He has shortened the continent of Asia, in the parallel of 66° north latitude, near 36°, and places the eastern cape of Asia in 54° north latitude, instead of 66° 2' its real latitude. He makes the northern coast east of the Indigirka to wind south-east from 67° north to 54° north. Cape Shelatskoi, the most north-east point of Siberia, is represented as a long narrow peninsula, jutting far into the sea in 65° north; the peninsula of Kamschatka is taken for the land of Jesso; and the mouth of the Amoor is fixed in 45° north, instead of 53° north, its true latitude. Except

these errors, and a few more, the map is excellent. The northern Imaus is correctly represented as running in a longitudinal line, and separating Tibet and Indostan from the Lesser Bucharía, under the name of *Mua-Taugh*, or the *Icy Mountains*; but Little Tibet, and the central and southern Imaus are left out, and their room is filled up with the southern part of Little Bucharía. *Cashgar*, and *Yarkund* in Little Bucharía, are placed 4° too far north. He is the first geographer who has introduced the great range of the *Beloor-Taugh*, or the *Western Imaus*, and the elevated upland of *Pamer*, into the map of Asia, and made it the dividing line between Central Asia, and *Khorasan*, and *Mawaralnahar*; and is also the first who introduced the lake of *Aral* into a map, and gave a correct delineation of the region between the rivers *Oxus* and *Jaxartes*, and the *Western Turkistan*. What errors have existed in this map respecting *Siberia*, were subsequently removed in the map of *Kryllow*, published in 1746, and in those of the *Imperial Academy* of *St. Petersburg* in 1776.

Modern geography was greatly enlarged by the appearance of *Du Halde's History of China*, and the atlas of maps accompanying that work, in 1732. This collection consists of 40 maps, most of which are one sheet each, and embraces the whole of China, the peninsula of *Corea*, *Mandshooria*, *Mongolia*, *Soongaria*, *Little Bucharía*, with *Eastern* and *Western Tibet*. Such a vast accession to the geography of Asia had not till then appeared. An atlas of China itself had been published long before, by *Father Martini*, a *Jesuit* missionary; but it was incorrect, and full of errors, through a deficiency both of information and of astronomical observations. In this performance, also, the province of *Lyantong* was placed within the boundary of the *Great Wall*, whereas it is without it, and to the north-east. But these errors are not chargeable on the maps of China itself, in the atlas of *Du Halde*, which were drawn up with great care, and are all founded on celestial observations. The fact is, a period of ten years was occupied in making the maps of China, *Mandshooria*, and *Mongolia*, as far west as *Hamí*, namely, from 1708 to 1718. Nine *Jesuit* fathers, eminent for their knowledge in mathematics and astronomy, were chosen by the emperor *Kanghi* to accomplish the work, who divided themselves into two companies in 1711, and traversed the whole of the provinces of China, and took a trigonometrical survey of each province, the longitudes and latitudes of all the principal cities in each province being fixed by lunar observations, eclipses of *Jupiter's* satellites, and meridian altitudes of the sun and polar stars. This method of combining celestial observations with triangular measurements, gives a degree of accuracy to these maps, that ensures confidence in their fidelity and exactness. The same may be said of those of *Mandshooria* and *Mongolia*. But equal confidence cannot be placed in the maps of *Corea*, *Tibet*, *Soongaria*, and *Little Bucharía*. The *Jesuits* were not permitted to visit the first of these countries, neither its maritime coast nor its interior. Hence the map of *Corea* was drawn up from one in the palace of the king of *Corea*, and has been proved since to be incorrect by *Captain Basil Hall*, who, in sailing up the *Gulf* of *Lyantong* to what he supposed the peninsula of *Corea*, discovered, that what was called the western coast in that map, was a large cluster of islands, running parallel with it, and therefore, that the peninsula was represented 100 miles broader than the truth. But ample testimony

to the accuracy of the *Jesuits' maps*, so far as respects the coasts of *Pecheli* and *Lyantong*, and the form of the gulf, has been paid by the same navigator. The maps of *Tibet* were drawn up in 1717, from *Tartar journals* and *itinerary measures*, and such information as could be procured from the *Lamas* at *Lassa*, and others of the natives, under the superintendence of two *Lamas*, well versed in geometry, sent for that purpose into *Tibet*, by *Kanghi* himself. It was a misfortune for geography that these *Lamas* were compelled to hasten their labours, or leave them imperfect; the *Eluth Tartars* having invaded *Tibet*, plundered *Lassa*, and transported the captive *Lamas* into *Soongaria*. This circumstance, joined to the total want of celestial observations, detracts from its value. The chief deficiency, however, is stated in *Du Halde* to be in the regions round the head of the *Ganges*; but excepting their error in mistaking the sources of the *Sutlege* and *Indus* for those of the *Ganges*, a mistake for which it is easy to account, the map of *Tibet* remains still unimpeached, and they tell very honestly, that their account of *Tibet*, west of the point where they halted, is entirely from the report of the natives. It does not follow, that because their map of *Little* or *Western Tibet* is wrong, a country these *Lamas* did not visit, therefore their map of *Great Tibet* is unworthy of all confidence, as has been insinuated by some modern geographers. That country was their native soil; that country they traversed all the way south-west from *Sining* in *Shensi* to *Lassa*, and from *Lassa* to the *Mansaroor Lake*, and their routes are distinctly traced in the map. It cannot indeed be said to be an exact map, like those of *China* and *Mandshooria*, for want of observations of latitude and longitude; but it is the only map we yet possess of that interesting and extensive region; and till further information be obtained, which is not likely soon to happen, we cannot justly condemn it. The maps of *Little Bucharía* and *Soongaria* are still less to be depended on than those of *Tibet*, being made entirely from report, and the journals of *Tartar* travellers, as the translator has carefully informed us in his remarks placed at the foot of each of these maps. In those other maps drawn up partly from report, and partly from observation, we are told in the tables what places were fixed by observation, and what not; and in those of *China Proper*, a table of all the longitudes and latitudes is placed at the foot of each, so that the reader knows on what authorities each map is drawn. The original maps, made as above said by the missionaries in consequence of *Kanghi's* orders, were all sent to *Paris*, and deposited in the *Royal Library*. From these the atlas was made under the superintendence of the illustrious *D'Anville*, who drew two general maps out of the particular ones made by the *Jesuits*, of *China* and *Chinese Tartary*, and another of all the regions from the mouth of the *Amoor* to *Kashgar*, including *China* and *Tibet*, and from thence to the *Caspian Sea*.

The labours of the elder *De Guignes* and *De Maille* threw farther light on the geography of *Asia*: the former by tracing the migrations of the *Huns* from *Mongolia* till they came in sight of the *Roman* historians; and the latter by his maps of ancient and modern *China*, in the *General History of China*, commenced in 1748, and finished in 11 vols. 4to, in 1780. A further addition was made to geographical knowledge by the conquest of the *Eluth Kalmucks*, in 1759 and 1761, when

a map of the conquered regions of Soongaria and Little Bucharía was made, under the guidance of three Jesuits, who accompanied the expedition. Tables of longitudes and latitudes, taken in these regions, are given in the first volume of the Chinese Memoirs. As we have mentioned the large map of China, drawn up by orders of Kienlong in 1766, we shall say no more respecting it.

Emulous of the fame of D'Anville, a number of geographers have since successively appeared in France; as Buache, Barbie-de-Bocage, Gosselin, and Malte Brune, a Dane; but none of them can be justly said to have inherited either his fame or his merits. Buache, in 1761, presented to the Royal Academy at Paris a set of maps, constructed on a new plan. Instead of political boundaries, which are constantly fluctuating, he adopted what he calls natural boundaries, as chains of mountains, courses of rivers, seas, and gulfs. Though it be undoubtedly true that these ought to constitute the essential parts of all maps, yet it is in many cases impossible to fix natural and immutable limits; for we must previously know all the mountain chains of the globe, both in respect of direction, extent, breadth, and elevation before this can be accomplished. But many of these ranges we do not know in any of the particulars above stated; and how, therefore, can we delineate their line of course on a map? The science of orography is yet but imperfectly known. It would require an intimate and profound acquaintance with the Interior of the globe, in order to enable us to fix with precision the line of direction of the grand chains of the globe, with their innumerable ramifications. It is but of late that mountains have attracted the eye of science, and for this we are indebted not so much to geographers as to geologists; and we must wait till the interior of Asia and Africa be explored, by persons qualified both in respect of geography and geology, before we can presume to make mountain ranges, natural boundaries. Buache himself proceeded on a capital mistake in supposing that all the great chains of the globe ran in a longitudinal direction; that they are continued from continent to continent under the ocean; and that their greatest elevations are under the equator. The fact is, they run as much in a meridional direction as in a longitudinal direction; as the Andes, which run south and north; the Rocky Mountains, south-east and north-west; the Apalachians south-west and north-east; the Himalaya north-west and south-east; and the Beloor-Taugh south and north. Another fact, in opposition to Buache, is, that the most elevated tracts of the globe are without the tropics, instead of being under the line; for most of the great rivers fall into the sea towards the poles or under the line, and the Himalaya range, which is entirely to the north of the tropic of Cancer, is higher far than the equatorial Andes. Barbie de Bocage has attempted a complete view of the geography of ancient Greece, in his Atlas of classical maps appended to the Travels of Anacharsis, accompanied with a memoir. But in this he has failed, for want of the actual knowledge of its modern geography. Gosselin has given an ingenious analysis of the geography of the Greeks and Romans, interspersed with much that is merely conjectural, and much that is erroneous. In a learned memoir prefixed to the late French edition of the Geography of Strabo, he has endeavoured to illustrate the itinerary measures of the ancients.

About the middle of the last century, Professor Busching of Gottingen published a circumstantial description of Europe, in six vols. 4to, which has been translated from German into English, accompanied with 36 maps engraved by Kitchen. But he confined himself wholly to modern geography, and introduced a new branch into it, called statistics. This prolix work is the basis of the popular Geographical Grammar of Guthrie, which has gone through so many editions. An excellent abridgment of Busching, with a supplementary description of Asia, Africa, and America, by Berenger, has lately appeared in ten vols. 8vo, in France. Since the time of Busching, other eminent geographers have appeared in Germany, as the learned Mannut, who has illustrated at great length the geography of the Greeks and Romans; Voss, that of the Greek and Roman poets; whilst Wahl has attempted to investigate that of the Lower and Middle Asia.

With the exception of General Roy, no geographer of any eminence appeared in our country till Rennel arose. It is rather a humiliating circumstance, that whilst so much was done in France and Germany towards the promotion of geographical science, by those eminent persons whose names and merits have been already mentioned, so little should have been done in this department of science in Great Britain. But it must be remembered, that in France geographical science has always been patronized by government, whilst in this country, any who shall undertake a system of universal geography, must, in order to ensure its reception, and remunerate his labour, accommodate his work to the taste of the public. Like other sciences, as geology, botany, and mineralogy, geography is a dry subject to the most of readers. To use the remark of an ancient geographer, Pomponius Mela, such a work is filled with difficulties, and susceptible of no elegance of style. *Orbis aitum, dicere aggredior, impeditum opus et facundia minime cupax.* In order to relieve this, it must be mixed up with other ingredients, which, however many, and however remote, are absolutely necessary to attract and secure readers. Hence geography, strictly so called, occupies but a very small portion of our most esteemed geographical systems. From this cause, geographical science neither did nor could make such progress here as in France, where small pensions and great honours, bestowed on a few individuals for devoting themselves exclusively to works of science and literature, have been the means of advancing mathematical and geographical science to a higher degree of prosperity and excellence than in any age or any country. But for royal patronage, scientific honours, and these pensions, which rendered them easy and independent, and left them full leisure to cultivate to the utmost of their power the darling object of their pursuit, De Lisle and D'Anville could no more have accomplished what they did in the science of geography, than a La Grange or a La Place in the science of the calculus. It is the reproach of Great Britain by foreigners that she is still without a geographical system that deserves the name. It is indeed true that our country has not yet produced a Bochart, or a D'Anville; but the successive labours of a Rennel, a Pinkerton, a Vincent, a Macdonald Kininry, and an Arrowsmith, have gone far to wipe away the reproach; for though their labours have been confined to the geography of particular portions of the terrestrial surface, as India and North Africa, by Rennel; illustrations of the geography of Herodotus and Xenophon.

ophon, by the same; the voyage of Nearchus and Periplus of the Erythrean Sea, by Vincent; Persia, by Kluvier; Aderbijan, by Morier; yet it is perfectly clear, that it is not for want of materials, nor of persons qualified to gather and embody them, but for want of a taste in the public, corresponding to that of an author who should attempt it. Till an alteration in public taste take place; till the public become so enlightened to the necessity and importance of geographical description and discussion, in order to attain a proper knowledge of the subject, no system, purely scientific and descriptive, which confines its attention chiefly to the surface of the globe, and its grand distinctive features, can succeed.

It was observed before, that the grand controversy respecting the sphericity of the globe contributed essentially to the improvement of geographical science. Newton and Huygens maintained that the globe was an oblate spheroid, elevated at the equator and depressed at the poles; Cassini maintained the contrary hypothesis, the globe being, in his opinion, a prolate spheroid, depressed towards the equator, and elevated towards the poles. This produced the necessity of measuring celestial arcs, or arcs of the meridian, in order to determine the question. Several of these were measured, which seemed at first to favour the theory of Cassini. In virtue of a royal mandate, procured by the French Academy of Sciences, six mathematicians, amongst whom were Condamine, Bouguer, Godin, Ulloa, and Don George Juan, were sent, in A.D. 1735, to measure a degree under the equator, while Maupertuis, Clairaut, Camus, and Mounier, went to Torneo, in Lapland, to measure the same under the arctic circle. By the operations of these latter, a degree of latitude in 66° north was found to be 350 toises greater than a degree at Paris, a proof that the earth is flattened toward the poles. In South America, in the district of Quito, a degree under the equator was found to be 2,052.6 English feet less than a degree at Paris, and 4,296 feet less than a degree at the polar circle, which determined the dispute in favour of Newton and Huygens. The space measured in South America contained a celestial arc of $3^{\circ} 7'$. Several arcs had been measured before this, to determine the amount of a degree of latitude, in order to determine its diameter, as that measured in A.D. 1523, by Fernel, at Paris, which came within 944 toises of the truth; by Snellius, at Leyden, in 1617; by Norwood, in England, in 1633, between York and London; by Riccioli, in Italy, in 1644 and in 1654; and by Picart, at Paris, in 1669. But none of these were accurate, especially that of Norwood, who supposed London and York to be under the same meridian, whereas the latter is a full degree west of the former, and the intervening distance was not accurately measured, being paced part of the way, and proper allowance not being allowed for curvature, &c. The error of Picart was owing to his measurement of the intercepted space by a toise too short by a line; and that of Snellius to several material errors in the measurement of his triangles. Several other measurements of arcs of the meridian were made subsequent to those made in Peru and Lapland, as that of De la Caille, in Africa, in 1751; of Mason and Dixon, in North America, and that of Boscovich, in Italy, between Rome and Venice; that of Beccaria, in Piedmont; and of Leisganig, in Hungary; and by General Roy, in England, after the peace of 1763. By these measurements, combined and compared, the true figure of the earth

has been determined to be an oblate spheroid, whose equatorial diameter is to its polar as 266 to 265.731. Leisganig's measurements, however, have been lately accused of want of accuracy, and have been severely criticised in the *Astronomical Journal* of M. Zach. General Roy made a geometrical survey of Scotland soon after the rebellion of 1745. A map of 80 sheets was constructed on this survey, which, though not altogether accurate, has great merit, and was diligently consulted by Mr. Arrowsmith, while engaged in his elegant map of Scotland. Arcs of the meridian have been lately measured, by order of the French government, from Barcelona to Dunkirk, and a geometrical survey of Great Britain was commenced by General Roy, and after his death, in 1790, was continued and finished by Captain Mudge and Mr. Dally, and the accurate maps thus obtained have been since published. At the request of the French government, the measurements of Maupertuis and his brother mathematicians were subjected to a revision by the Swedish astronomers Oeverboom and Melanderhielm, in 1603, and found to be incorrect, and the errors committed were removed.

But none of these arcs of the meridian above mentioned, whether in the New or the Old World, whether under the equator or the arctic circle, have equalled that measured in the Peninsula of India under the auspices of the Madras government, by Colonel Lambton. It is in fact the longest meridional arc that has been measured on the surface of the globe, extending from $8^{\circ} 9' 38''$ north latitude, to $18^{\circ} 3' 23' 6''$, or $9^{\circ} 53' 45''$ of latitude, or 593 $\frac{1}{2}$ geographical miles. According to the theory of Newton, the degrees of the meridian must increase as we go northward, and in our latitude nearly each degree, at an uniform rate, must exceed that immediately south of it, by about 20 fathoms, according to those who make the earth's oblateness greatest, and by about 10 according to those that make it least. But this has not been found to be uniformly the case in the trigonometrical survey of England and Wales, for in $50^{\circ} 24' 44''$ north latitude, a degree of latitude is 60,851 fathoms; in $51^{\circ} 35' 15''$ of latitude, 60,864 fathoms; in $52^{\circ} 2' 20''$ 60,880; and in $52^{\circ} 50' 30''$, 60,766 fathoms. The cause of these irregularities has not yet been satisfactorily ascertained. Don Rodriguez, a Spanish mathematician, ascribed it to want of accuracy in the measurement, whilst those who defended its accuracy ascribed it to magnetic influence, caused by a supposed mass of iron below the surface, in the line of the intercepted space, which deflected the plummet. A similar irregularity occurred in Colonel Lambton's measurement of the arch between Putschopoliam and Doodagoontah, and that between the former and Bomasundrum, causing a difference of 80 fathoms in the same degree on the elliptic hypothesis. A bed of iron ore which lies below the surface between Doodagoontah and Bomasundrum is assigned by Lambton as the cause of the irregularity, by deflecting the plummet to the north, whilst observing at Doodagoontah, and to the south, while at Bomasundrum, thus making the celestial arch between Putschopoliam and Doodagoontah too little, and that between Putschopoliam and Bomasundrum too great, the reverse of which would take place respecting the length of the degrees in these two arcs. While such internal disturbing causes exist, it is impossible to give the exact length of every degree of latitude by measurement, with mathematical precision. The utmost we can arrive at is approxi-

mentation. He was, however, enabled by subsequent astronomical observations, at a station near Gooy, to set aside the doubtful observations at Doodagootah. He found the mean length of a degree, in $9^{\circ} 34' 44''$ north, to be 60,472 fathoms; in $13^{\circ} 2' 55''$ north, 60,487 fathoms; in $16^{\circ} 34' 42''$, 60,510. These clearly evince the gradual lengthening of the meridional degrees as we advance north, and is in agreement with all preceding observations, that the polar axis is shorter than the equatorial. Comparing this Indian measurement of a degree with those measured in France, England, and Sweden, it appears that the compression at the poles is 1-310th part of the length of the axis, instead of 1-230th part of the same, as Newton inferred, from the theory of gravitation, &c. The comparison of the Indian measurement with the French measurement gives 1-309.15 for the compression; compared with the English measurement, it gives 1-313.54 for the same; and compared with the Swedish measurement, 1-307.19. The mean of these three compared with it, give 1-309.96th, or almost 1-310th for polar compression. From the preceding degree of compression at the pole, Lambton has calculated the length of a degree from the equator to the poles, in a table of three columns, the first exhibiting the degrees on the meridian, the second those on the perpendicular, and the degrees of longitude. From this table, it follows that a degree of latitude at the equator is 68,704 English feet; in north latitude 45° , 69,030 English feet; in 51° north latitude, 69,105; and in 90° north latitude, 69,378 English feet; so that the mean length of a degree of latitude is at most 69 1-10th English miles, instead of 69 1-5th, as formerly estimated. The measurements of Bouguer, in Peru, La Caille, in South Africa, and Maupertuis in Lapland, are here laid aside; for though Bouguer's measurement is the most correct of these three, yet he was led into mistakes, by that of Maupertuis, which was found by the Swedish astronomers to have erred more than 200 fathoms; and that of La Caille is as inconsistent as that of Maupertuis, who, besides, draws a conclusion equally inconsistent with the doctrine of rotatory motion, namely, that the meridians south of the line have a different curvature from those to the north of it, or that the degrees of longitude in the same latitude are different in the two hemispheres. Other arcs of the meridian have since been measured in the Austrian dominions, as in Italy and the Tyrol, in the Sardinian dominions, in Jutland, and in European Russia, but their combined results we have not yet known. But, as before remarked, the law by which the amount of ellipticity at any point on the earth's surface is a problem not yet solved. The effects of celestial and terrestrial refraction, the temperature of the atmosphere, the attraction of mountains, and the secret influence of magnetism, in connexion with the nature of the instruments employed, and the different abilities of those engaged in such measurements, all combine to render the mensuration of an arch variable. So that in this way we can never arrive at the exact ratio of the earth's ellipticity from the equator to the poles. Another plan to determine with exactitude the difference between the equatorial and polar diameters of the globe, is the method of finding it by pendulums, first suggested by Huygens. It has been found by numerous observations on the length of the pendulum, in different parts of the globe, that the length of the second's pendulum increases from the

equator to the poles, like the degrees of latitude, and that its increase is proportional to the square of the time of the latitudes. Hence, by ascertaining the length of the second's pendulum at every degree of latitude, the exact length of that degree may be found, and therefore the exact degree of elevation at the equator, and of depression at the poles. This has been accomplished by Captain Sabine, in his account of experiments to determine the figure of the earth by means of pendulums, vibrating seconds in different latitudes. This gentleman's work obtained, in June, 1826, the astronomical prize left by De La Lande, for determining this problem, which was adjudged to him in the meeting of the Academy of Sciences at Paris, held that year. Thus the dispute concerning the ellipticity of the globe has mightily improved geography, by the number of celestial arcs that have been measured, and by a greater approximation to the knowledge of the true figure of the globe than would otherwise have been attained.

Thus we have brought down the history of geography from its earliest drawings to its present degree of perfection, and from it may be seen how far we excel the ancients in our knowledge of its form, motion, and magnitude, in the methods of ascertaining latitudes and longitudes; in the number and variety of instruments necessary for these purposes; in the laws which regulate its motions; and in the actual greater knowledge of its surface. Some of the ancients held it to be of the form of a drum, as Leucippus; of a rolling-pin or cylinder, as Anaximander; of a boat, as Heraclitus; of a semicircle, as Crates; of a sling, as Posidonius; of a table, as Hipparchus. Others of them thought it hollow, because water rests upon it; and others thought it a broad circular plain; others an island surrounded by the ocean; others a quadrangular form; and others, as Lactantius and several of the Fathers, a great circular plain extending downwards with infinite roots; and though Eratosthenes and Ptolemy both believed and taught its globularity, yet so great was the influence of the clergy, that even Ptolemy's system, imperfect as it was, was not received into the schools till very lately. Even at the end of the 14th century, it was the common opinion of theologians that the earth was flat; and that voluminous commentator, Toletus, Bishop of Avila, a little before the discovery of America, rejected the opinion that the earth was a sphere, because it was a rash doctrine, and inconsistent with the soundness of Christian faith. As to the motion of the earth, with the exception of Pythagoras and his followers, all the ancients, with Ptolemy at their head, denied both the diurnal and annual motion of the earth, or, in other words, its motion round its axis, and its motion round the sun in a path or orbit. Their different opinions of its magnitude may be seen by referring to what has been already mentioned. Their method of ascertaining latitudes was chiefly by gnomons or sun-dials, and in determining longitudes they had no other method till the time of Ptolemy, but itinerary measures and computed distances, and the method of lunar eclipses, invented by Ptolemy, as before observed, to determine these, was always liable to error. Respecting instruments of observation, their only instruments were an astrolabe or a gnomon, for ascertaining latitudes. They knew nothing of the sextant or the telescope; they were ignorant of the mariner's compass, and consequently of bearings. Some of them allowed only one

wind, others two, others four, and Andronicus Cyrrhestes, eight; Pliny, Seneca, and Aristotle, twelve; and Vitruvius 24. As the knowledge of hydrography is of great use to that of geography, so whatever promotes the one, promotes the other. Ignorant of the use of the compass, they neither knew their true direction, nor the true bearings nor forms of coasts, nor depths of gulfs. They could never ascertain exactly where they were, how far they had sailed, at what rate they were sailing, or the true direction of their course. For their assistance in navigation, they had the knowledge of a few stars. They had no other instrument to ascertain their latitude at sea but what is called the *sea astrolabe*, and this was often of no use, from the unsteady motion of the ship. This difficulty has been long removed, by the invention of Hadley's quadrant. It was still more difficult for them to determine their longitude while at sea. They were even ignorant of the use of the log. This difficulty has been removed by the invention of chronometers, or time-keepers, particularly that of Harrison's. But the lunar method is still more useful than that of time-keepers, as these are liable to a variety of accidents, which no sagacity can prevent; and because that, in very long voyages, the means of verifying their rate of motion seldom occur. The problem of finding the longitude at sea, depended on the exactness with which the moon's place could be found in the heavens. The profoundest researches of Clairaut, Euler, and D'Alembert, were engaged in determining the mean periods of the inequalities in the motions of the moon, as these were affected by the action of the sun and the earth. Guided by these results of their successive labours, Mayer of Gottingen compiled a set of solar and lunar tables, the most accurate that man had ever seen, in 1755, which gave the longitude of the moon within 30'. These were subsequently improved by Dr. Maskelyne, and Mr. Mason, and still more lately, by Burg and Burkhardt; the error of these last tables will seldom exceed 15" or 7½ miles of longitude. To supersede the labour of computations necessary to be made in using these tables, the Nautical Almanack was published at the suggestion of Dr. Maskelyne, and which is now annually continued. The longitude is thus ascertained to such a nicety, that the navigator is secured from all danger arising from the former imperfect modes of finding it. He is now enabled to make for his port without sailing into the parallel, and then, in the seaman's phrase, "Running down the port on the parallel," as was done before this method was practised. Fifty years ago, navigators did not attempt to find their longitudes at sea unless by their reckoning, which was hardly ever to be depended on.

The ancients were ignorant of the use and form of the telescope, by which alone the satellites of Jupiter can be seen. These satellites, or moons, are four in number, and suffer frequent eclipses from passing through Jupiter's shadow, in the same way as our moon is eclipsed by passing through the shadow of the earth. By means of these eclipses, the motion of light was ascertained, and they are found to be of essential use in determining longitudes. For want of telescopes, the ancients, of course, were ignorant of the very existence of such moons, and could not, therefore, determine longitudes by them. Telescopes, also, have been essentially useful when applied to quadrants in the measurement of

celestial arcs—such measurements being much more accurate than the ancients could possibly do by their imperfect methods. The map of France, mentioned by our author in his reflections on the satellites of Jupiter, was constructed by Cassini, who, along with other mathematicians, measured the whole area through France, in 1718. The great map of France, founded on this measurement, was 186 sheets, but it was not finished till the reign of Louis XVI.

Though the ancients could measure heights geometrically, yet from want of knowledge of terrestrial refraction, and the laws by which it is regulated, they could never take them with that precision which is done in modern times; and besides, we have no account of their base lines, to enable us to determine from what level they took the elevations. They were ignorant of the use of barometers in determining the pressure of the atmosphere, or how that pressure is modified by heat or moisture; for they had no thermometers to determine the one, nor hygrometers to ascertain the other. For want of these, they were also unable to determine the amount of refraction, as it is regulated by density, heat, and moisture. As, with the exception of Pythagoras, and a few others, they were ignorant of the diurnal and annual revolutions of the globe, so also were they ignorant of the laws which regulate these, resulting from the sublime doctrine of gravitation, that mysterious power, which connects the most distant points of space, and the most remote periods of duration. From all these deficiencies in science, in instruments, and methods of observations, what they did know of the geography and surface they knew but imperfectly, and many things respecting these they knew not at all. Their knowledge of the terrestrial surface, so far as respects extent, was very limited, as has been already shown. Not above one-fourth of the Asiatic continent was known to them, nor above one-third of Africa. Of the north of Europe they knew nothing beyond the 60th degree, unless perhaps northern Thule be excepted; and the American continent was utterly unknown. From their very limited knowledge of botany; their almost total ignorance of chemistry; their deficiencies in mineralogy and natural history; their ignorance of orography and hypsometry, of meteorology, &c. all of which the present advanced state of human knowledge have rendered subservient to geographical description, they were unable to give full, accurate, and enlightened views of the physical geography, and natural productions of any country. So extended now is the modern knowledge of the globe, that with the exception of Central Asia, the Indo Chinese territories, and the interior of Africa, there is scarce a region, country, or island, but has been visited, made known, and their place assigned in maps; and no sooner has a traveller filled up a void, or rectified an error, than the map of the place or region he has visited becomes more full and accurate. Even with such knowledge as the ancients possessed of the surface, they were unable to give a just representation of that surface, from their ignorance of spherical projection. Yet with all our increased knowledge of the terrestrial surface, still much remains to be done. Geography is a practical science, as our author well observes, and cannot therefore proceed with very rapid pace, as it requires a vast number of operations and observations to render it perfect. Even in those countries with which we are best acquainted, much

still remains to be ascertained, before their geography can justly be called complete. We are much less deficient and inaccurate in our knowledge of the natural history of the globe, than in its geography, strictly so called; that is, in the extent, direction, latitudes and longitudes, direction and elevation of mountains, rise, course, and termination of rivers, &c.

The ignorance of the ancients in nautical science rendered them still more ignorant of the hydrography, than of the geography of the globe. We, on the contrary, are better and more extensively acquainted with the former than the latter, from our improvements in that very science of which the ancients were comparatively ignorant. The coasts of every continent, and almost every island, have been examined and made known. Hardly a bay, gulf, or inland sea, but has been explored; whereas, the hydrography of the ancients was confined to the Mediterranean Sea and its gulfs, and part of the

Atlantic; for with the Red Sea, Persian Gulf, and Indian Ocean, they were but imperfectly acquainted, and were utterly ignorant of the existence of the Great Pacific Ocean. The same ignorance both as to the geography and hydrography of the globe prevailed amongst the oriental geographers; for if they were more and better acquainted with their own regions and their own seas than were the Greeks and Romans, they, on the other hand, were equally ignorant of the geography of the Greek and Roman world, and their ignorance in other sciences pertaining to geography was the same.

Thus we have given a comparative view of the geographical knowledge of the ancients and moderns. We have said nothing of Chinese or Indian geography, as these nations knew, and still know very little about the subject; and what they did or do know is as little worth telling as it is little worth reading.

OF NAVIGATION.¹

I SHALL examine only one point in this place, which is the wonderful change that an experiment, which might appear of small importance, has occasioned in navigation, and the superiority we have acquired in this respect over the ancients, by a means that seemed trivial in itself. I allude to the invention of the compass. This instrument is a box that has a needle in it touched with a loadstone, that turns always towards the pole, except in some places where it has a declination.

The ancients, we know, who steered their ships by the sun in the day, and the stars during the night, in misty weather could not discern what course to hold; and for that reason, not daring to put out to sea, were obliged to keep close to the shore, and could not undertake voyages of any considerable length. They knew one of the virtues of the loadstone, which is to attract iron. One would think that the slightest attention might have occasioned their discovering its other property, of directing itself towards the pole of the world, and in consequence have led them on to the compass. But he who disposes all things, kept their eyes shut to an effect, which seemed of itself obvious to them.

Neither the author of this invention, nor the time when the use of it was first thought of, is precisely known.² It is, however, certain, that the French used the loadstone in navigation long before any other nation of Europe, as may be easily proved from the works of some of our ancient French authors,³ who spoke of it first above four hundred years ago. It is true, the invention was then very imperfect. For they say, that the needle was only put into a bowl or vessel full of water, where it could turn itself towards the north supported upon a pin. The Chinese, if we may believe certain modern relations, make use to this day of the same kind of compass.

The navigators perceiving the importance of this invention, made many astronomical observations towards the beginning of the fourteenth

century to assure themselves of it, and found, that a needle touched with a loadstone, and set *in equilibrio* upon a pivot, did actually turn of itself towards the pole, and that the direction of such a needle might be employed for knowing the regions of the world, and the point⁴ of the wind in which it is proper to sail. By other observations it has been since discovered, that the needle does not always point to the true north, but that it has a small declination sometimes towards the east, and sometimes towards the west; and even that this declination changes at different times and places. But they found also the means of knowing this variation so exactly by the sun and stars, that the compass may be used with certainty for finding the regions of the heavens, even when clouded, provided that it has been rectified a little before by the observation of the stars.

The curiosity of the learned of Europe began at that time to awake. They soon invented various instruments, and made tables and calculations for facilitating the observation of the stars. Never had navigation so many advantages for succeeding. The pilots did not fail to make the most of them. With these helps they crossed unknown seas; and the success of their first voyages encouraged them to attempt new discoveries. All the nations of Europe applied themselves to them in emulation of each other. The French were the first in signaling their courage and address; they seized the Canaries, and discovered great part of Guinea.⁵ The Portuguese took the Island of Madeira and that of Cape Verd; and the Flemings discovered the Islands of the Azores.

These discoveries were only preludes to that of the New World. Christopher Columbus, founding his design upon his knowledge of astronomy, and, as it is said, upon the memoirs of a Biscayan pilot, whom a storm had thrown upon an island of the Atlantic ocean, undertook to cross that sea. He proposed it to several of the princes of Europe, of whom some neglected it because engaged in affairs of a more urgent nature, and others rejected it because they neither comprehended the importance of that expedition,

¹ See the Supplement to the article Commerce, p. 72, wherein is given an outline of the history of commerce and navigation, from the earliest period down to the time of Ptolemy.—Ed.

² Cassini's Astron. Memoirs. ³ Guyot de Provence.

⁴ Of which points there are thirty-two upon the compass.

⁵ Hist. de la Conquete des Canaries par Bethencourt.

nor the reasons that Columbus gave to explain the possibility of it. Thus the glory of the discovery of the New World was left to the kings of Castile, who afterwards acquired immense riches by it. Columbus well knew, from his knowledge of the sphere and geography, that sailing continually towards the west under the same parallel or very near it, he could not fail of finding lands at length, because if he found no new ones, the earth being round, he must necessarily arrive by the shortest course at the extremity of the East Indies. In his voyages from Lisbon to Guinea, sailing from north to south, he had been confirmed by experience that a degree of the earth's circumference contains fifty-six miles and two-thirds, according to the measure established by the astronomers of Almamoon; and he had learned in the books of Ptolemy, that, keeping always to the west, from the Canaries to the first lands of Asia, there are only an hundred and eighty degrees.¹ Accordingly, he set out from the Canaries, steering always to the west under the same parallel.² As he did not entirely rely upon the compass, he always took care to observe the sun by day, and the fixed stars by night. This precaution prevented him from mistaking his course. For those who have written his life say, that his observations of the heavens made him perceive a variation in his compass, which he did not know before, and that he rectified his way by them. After sailing two months, he arrived at the Lucay Islands, and thence went on to Hispaniola, Cuba, and St. Domingo, whence he brought back great riches into Spain.³ Astronomy, by which he had discovered these rich countries, assisted him also in establishing himself there. For, in his second voyage, his fleet being reduced to extremities by the want of provisions, and the inhabitants of Jamaica refusing to supply him with them, he had the address to threaten them with darkening the moon at a time when he knew there would be an eclipse; and as that eclipse really happened the day he had foretold, the terrified barbarians granted him whatever he pleased.

Whilst Columbus was discovering the southern part of the New World, the French discovered the northern part of it, and gave it the name of New France.

Americus Vesputius⁴ continued the discoveries of Columbus, and had the advantage of giving his name to the whole New World, which has ever since been called America. Astronomy was of great use to him in his voyages.

On the other side, the pilots of the king of Portugal, who till then had only traversed the coasts of Africa, doubled at this time the Cape

of Good Hope, and opened themselves a passage into the East Indies, where they made very great conquests.

Is there in all history an event comparable to that which I have now related, namely, the discovery of the New World? Upon what did it depend for so many ages? Upon the knowledge of a property of the loadstone, easily discoverable, which had however escaped the inquiries of an infinite number of the learned, whose sagacity had penetrated into the most obscure and most profound mysteries of nature. Is it possible not to discern here the finger of God? Columbus had never thought of forming his enterprise, and indeed could never have succeeded in it, without a great knowledge of astronomy; for Providence delights in concealing its wonders under the veil of human operations. How important therefore is it in a well governed state, to place the superior sciences in honour and reputation, which are capable of rendering mankind such great services, and which have actually hitherto procured them, and still continues to procure them, such considerable advantages?

The reader will permit me to say a few words in this place upon two voyages of the learned, which do the king (Louis XV.) and literature in general great honour.

Voyages to Peru and into the North, undertaken by order of Louis XV.

In 1672, Mr. Richer observed, in the island of Cayenne, that the curvation of the superficies of the earth was greater there than in the temperate zone. Hence it was concluded that the figure of the earth must be that of a spheroid flat towards the poles, and not elliptical, or oblong, as it was and still is believed by very skilful astronomers; for the point is not yet determined. Newton and Huygens came afterwards by their theory to the same conclusion. It was to be assured of this truth, that in the 1735, at a time when France had a war to support, which has since terminated so gloriously for her, the king, always intent upon making the sciences flourish in his dominions, sent astronomers to Peru and into the north, in order to determine with certainty by accurate observations the figure of the terrestrial globe. Nothing was spared, either in respect to the expenses of the voyage, or to procure them all the conveniences that might promote their success.

We saw them in consequence set out, part of them to expose themselves to the burning heats of the torrid zone, and the rest to fly with the same ardour to confront all the horrors of the frozen north. The first have not been heard of for a considerable time; but great discoveries are expected from their inquiries. The others returned from the north some months ago. The

¹ Ferdinand Columbus, in his *Life of Columbus*, chap. 4.

² Chap. 17.

³ Chap. 22.

⁴ Vesput. Navig. prim.

account of what they suffered in order to give their operations all the perfection of which they were capable, is scarce credible. They were obliged to traverse immense forests, in which they were the first that ever opened themselves way ; to scale mountains of amazing height, and covered with wood, which it was necessary for them to cut down ; to pass torrents of an impetuosity capable of astonishing such as only beheld them, and that too in wretched boats, that had no other pilot but a Laplander, nor mast nor sails but a tree with its branches. Add to this, the excessive cold of these regions remote from the sun, of which they experienced all the rigours ; and the gross nourishment on which they were reduced to subsist during a very considerable length of time. It is easy to conceive the courage these indefatigable observers must have had

to surmount so many difficulties, that seemed to render the execution of the project confided to them impossible. The late reading of the account of this voyage in the Academy of Sciences, since their return, has made the public very desirous to see it printed.

One is sometimes tempted to treat as useless such laborious and scrupulous observations, that have no end but to determine the figure of the earth ; and there are many who will perhaps believe, that those who made them might have spared themselves the trouble, and made a better use of the money employed in them. But this proceeds from the ignorance of the relation of observations of this nature to navigation, and the advantages resulting from them to astronomy. This event will not a little conduce to exalt the glory of the reign of Louis XV.

CONCLUSION OF THE WHOLE WORK.

AFTER having made almost all the states and kingdoms of the universe in a manner pass in review before our eyes, and having considered circumstantially the most important events that occurred in them during the course of so many ages, it seems natural enough to go back a moment, before we quit this great scene, and to collect its principal parts into one point of view, in order to our being able to form the better judgment of it. On the one side we see princes, warriors, and conquerors; on the other magistrates, politicians, and legislators; and in the midst of both, the learned of all kinds, who, by the utility, beauty, or sublimity of their knowledge, have acquired immortal reputation. These three classes include, in my opinion, all that is most shining, and most attractive of esteem and admiration in human greatness. I consider the universe here only in its fairest light, and for a moment take off my view from all the vices and disorders that disturb its beauty and economy.

Before me stand princes and kings, full of wisdom and prudence in their counsels, of equity and justice in the government of their people, of valour and intrepidity in battle, of moderation and clemency in victory, subjecting many kingdoms, founding vast empires, and acquiring the love of the conquered nations no less than of their own subjects: such was Cyrus. At the same time I see a multitude of Greeks and Romans, equally illustrious in war and peace; generals of the most exalted bravery and military knowledge; politicians of exceeding ability in the arts of government; famous legislators, whose laws and institutions still amaze us, while they seem almost incredible, so much they appear above humanity; magistrates venerable for their love of the public good; judges of great wisdom, incorruptible, and proof against all that can tempt avidity; and lastly, citizens entirely devoted to their country, whose generous and noble disinterestedness rises so high as the contempt of riches, and the esteem and love of poverty. If I turn my eyes towards the arts and sciences, what lustre do not the multitude of admirable works come down to us display, in which shine forth, according to the difference of subjects, art and disposition, greatness of genius, riches of invention, beauty of style, solidity of judgment, and profound erudition.

This is the great, the splendid scene, that history, the faithful register of past events, has hitherto presented to our view, and upon which it now remains for us to pass our judgment. Is it possible to refuse our esteem to such rare and excellent qualities, such shining actions, and noble sentiments? Let us call to mind the maxims of morality in the writings of the philosophers, so refined, so conformable to right reason, and even so sublime, as to be capable sometimes of making Christians blush. Do not men of such profound knowledge and understanding deserve the name of sages?

The just Judge of all things, by whose judgment it is our duty to direct our own, absolutely denies it them, as Mr. du Guet observes so justly in several of his works, and as I have said elsewhere. "The Lord," says the royal prophet, "looked down from heaven upon the children of men, to see if there were any that did understand and seek God."¹ The earth is full of persons that excel in arts and sciences. There are many philosophers, orators, and politicians. There are even many legislators, interpreters of laws, and ministers of justice. Many are consulted as persons of extraordinary wisdom, and their answers are considered as decisions, from which it is not allowable to depart. However, among so many wise and intelligent persons in the sight of men, God discerns none that are not foolish and mad. "They are all gone aside, they are altogether filthy: there is none that doth good, no not one." The censure is general and without exception. What then is wanting in these pretended wise men? The fear of God, without which there is no true wisdom, "to see if there was any that did understand and seek God:" the knowledge of their own misery and corruption, and their want of a Mediator, and a Restorer or Redeemer. Every thing is in esteem among them, except religion and piety. They know neither the use nor end of any thing. They go on without design, or knowing whither they should end. They are ignorant of what they are, and what shall become of them. Can folly be more clear and evident?

The thoughts of God are very different from those of men. The universe peopled with

powerful kings, famous legislators, celebrated philosophers, and learned men of all kinds, is the object of our admiration and praise ; and God sees nothing but disorder and corruption in it : " The earth was corrupt before God."¹ The qualities, knowledge, and maxims of which I speak, were, however, very estimable in themselves. They were the gifts of God, from whom alone comes all good, and all knowledge : but the Pagans perverted their nature by the unworthy use they made of them, in considering themselves as their principle and end. I speak here even of those among them who passed for the best and wisest, whose virtues were infected either with pride or ingratitude ; or, to speak more properly, with both.

I have observed that certain ages, which abounded with illustrious examples either at Athens or Rome, exhibit a grand and noble scene in history : but there was at the same time a circumstance which highly disgraced the glory, and sullied the beauty of these ages ; I mean the idolatry that generally prevailed throughout the universe. The whole earth was covered with thick darkness, and lay plunged in gross and stupid ignorance. Only one country, and that of very small extent, knew the true God : " In Judah is God known : his name is great in Israel."² Elsewhere all mouths were mute in respect to him, and the hymns of idolatrous solemnities were only invitations to crimes, which the seducer of mankind had made their duty. " God suffered all nations to walk each after their own way,"³ to make themselves gods of all creatures, to adore all their own passions, to abandon themselves through despair to those which are most shameful, to be ignorant of their

origin and end, to direct their lives by errors and fable, and believe every thing indiscriminately, or nothing at all.

One would imagine that man, situated in the midst of the wonders which fill all nature, and largely possessed of the good things of God, could not forget him, or remember him without adoration and fidelity. But in the midst of the greatest light he behaved like the blind. He became deaf to all the voices that proclaimed the Majesty and Holiness of the Creator. He adored every thing, except God. The stars and sun, that declared the Divinity, he honoured in his stead. Wood and stone, under a thousand forms, which his wild imagination had invented, were become his gods. In a word, false religion had deluged the whole earth ; and if some few were less stupid than the rest, they were equally impious and ungrateful. Did not the only one of these,⁴ who had explained himself too clearly, deny in public what he believed in private ? Whence we may observe, of what avail the reason of all mankind was, when they had no other guide.

We see here the principal fruits to be derived from the study of profane history, of which every page declares what mankind were during so many ages, and what we ourselves should still have been, had not the peculiar mercy, which made known the Saviour of the world to us, drawn us out of the abyss, in which all our forefathers were swallowed up. " It is of the Lord's mercies we are not consumed." A mercy freely and entirely conferred, which we have no power to deserve in any manner of ourselves, and for which we ought to render eternal homage of gratitude and praise to the grace of Jesus Christ.

1 Gen. vi. 11. 2 Psalm lxxvi. 1. 3 Acts xiv. 16.

4 Socrates,

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